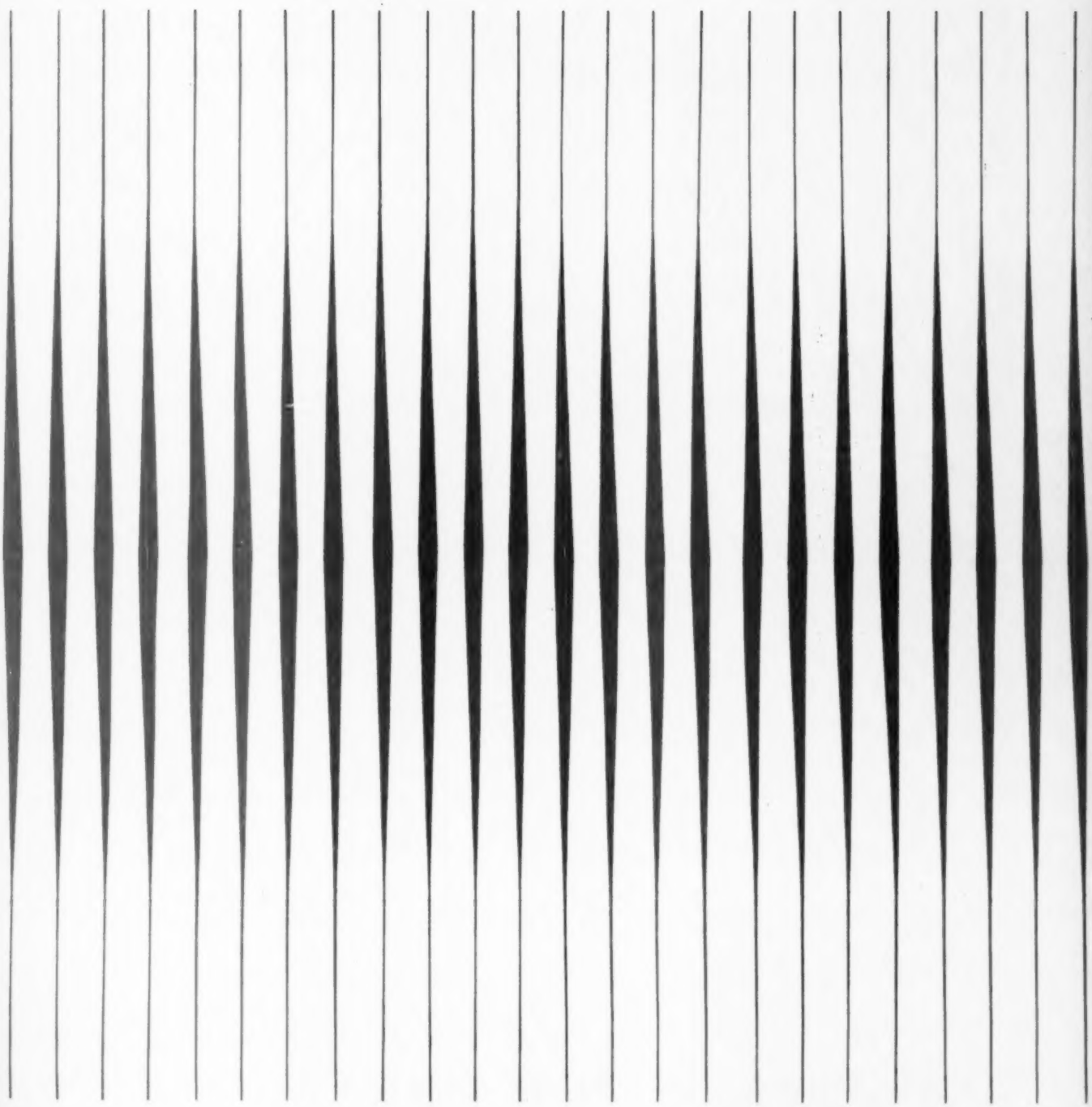
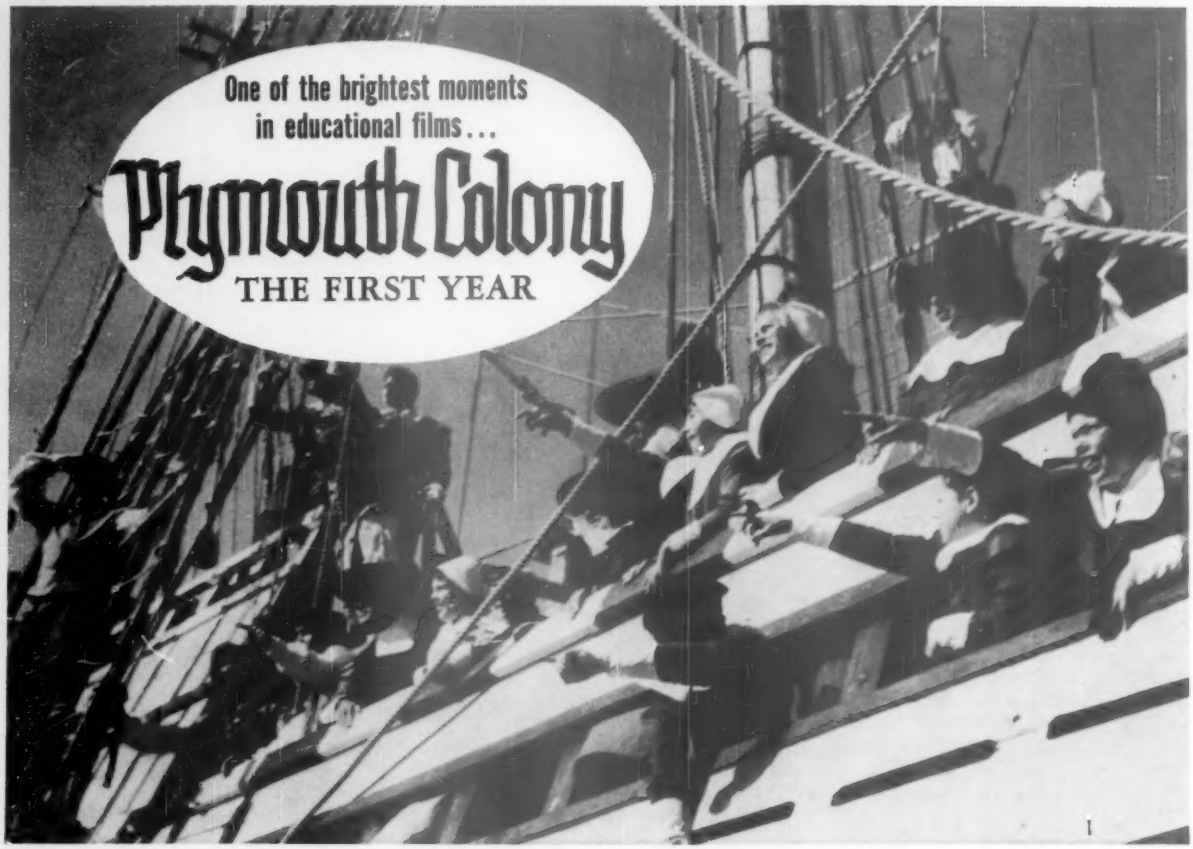
AUDIOVISUAL INSTRUCTION

Published by the Department of Audiovisual Instruction, NEA

NOVEMBER 1961



EXPERIMENTATION AT THE GRASSROOTS



A new CORONET FILM
for U.S. History and American heritage

Against the authentic background of the restored Plimoth Plantation in Plymouth, Massachusetts, and aboard the full-scale replica of the *Mayflower,* this film takes us back to the first year spent by the Pilgrims in the New World. Modern research has revealed that the Pilgrims were far from being the austere, forbidding people often depicted. The film shows warm, wonderful human beings—people who worked, laughed, suffered, and struggled as they set themselves to the great task of building new lives in a new land.

The film portrays the events which forced the Pilgrims to leave Europe aboard the *Mayflower* . . . the difficult conditions under which the trip was taken . . . and how, with their numbers reduced from one hundred to less than fifty, this hardy band of colonists established a foothold in the New World. Their Thanksgiving feast shows us how proud and grateful they were they could stand on their own in the glorious, untamed land of North America.

This 1½ reel (16 minute) film is available in full color as well as in black-and-white.

Other Recent Coronet Films on American History and Heritage . . .
(All available in full color or in black-and-white at lengths indicated)

. . . Beginnings and Growth of Industrial America (11 min.; Gr. 4-12)

. . . Immigration in America's History (11 min.; Gr. 7-12)

. . . The Jamestown Colony (1607 through 1620) (16 min.; Gr. 4-12)

. . . The Meaning of Patriotism (13½ min.; Grades 4-9)

. . . The Pony Express in America's Growth (11 min.; Gr. 4-9)

. . . Westward Growth of Our Nation (1803-1853) (11 min.; Gr. 4-9)

. . . The White House, Past and Present (13½ min.; Gr. 4-12)

. . . William Penn and the Quakers (The Pennsylvania Colony) (11 min.; Gr. 4-9)

CORONET FILMS

To preview these films

Each of the films listed or described on these pages may be previewed for purchase consideration at no obligation except for return postage. Use the coupon to check those titles you wish sent you for examination. *You may also request your copy of a new brochure describing 78 Coronet films for United States History with information on preview and purchase.*

CORONET FILMS
Dept. AV III
Coronet Building • Chicago 1, Illinois

☐ Please send preview prints of the following films for purchase consideration:

- ☐ Plymouth Colony: The First Year
- ☐ Beginnings and Growth of Industrial America
- ☐ Immigration in America's History
- ☐ The Jamestown Colony (1607 through 1620)
- ☐ The Meaning of Patriotism
- ☐ The Pony Express in America's Growth
- ☐ Westward Growth of Our Nation (1803-1853)
- ☐ The White House, Past and Present
- ☐ William Penn and the Quakers (The Pennsylvania Colony)

Name_____

School_____

Address_____

City_____ Zone____ State_____

". . . to help improve instruction through the more effective use of materials."

VOL. 6 NO. 9 *November 1961*

AUDIOVISUAL INSTRUCTION

Contents

435 **Students Meet Automation Head On**
Robert M. Sekerak

437 **Telemation: AV Automatically Controlled**
Richard D. Hubbard

440 **The Audiovisual Kit**
Patsy Seeley and Gene White

441 **An English Teacher Looks at Programed Learning**
Gladys Nunn

443 **Films and Filmstrips Spark the Reading Program**
Delores Voland

444 **Project Marsflight—Astronautics After School**
Richard A. Ibison

447 **The Classroom Simulator**
Bert Y. Kersh

449 **Summer Exhibits at Western Michigan**
Carl B. Snow

450 **The School TV Studio as an Audiovisual Tool**
W. Clyde Duvall

452 **How Good Is TV for Teaching Science?**
Don Nasca

454 **Closed Circuits for Tape Recordings**
Herman C. Henderson

456 **AV for Independent Study**
L. D. Miller

458 **Ambassadors Without Portfolio**
Clifton B. DeVoe

459 **California Blueprint for Appraisal of Title III**
Donald W. Johnson

EDITORIAL COMMENT

492 **Are You Working More Now and Enjoying It Less?**
Anna L. Hyer

DEPARTMENTS

464 **Convention**

466 **Candidates**

470 **Looking at New Literature**

472 **King Comments**

EDITORIAL STAFF

EDITOR Anna L. Hyer

MANAGING EDITOR Alice Finstad

ART DIRECTOR Joe Jacobs

CIRCULATION MANAGER Florence Ih-Chi Fan

MATERIALS AND EQUIPMENT
Robert H. Burgert and William H. King

LOOKING AT NEW LITERATURE
Edward T. Schofield

ADVERTISING SALES

1201 Sixteenth Street N.W., Washington, D.C.

ADVERTISING MANAGER John J. Faber

ADVERTISING ASSISTANT Clara Hayden

REPRESENTATIVES

EAST — Mead Irwin Associates, 520 Fifth Avenue, New York 36, N.Y.

MIDWEST — Stanley J. Smith, 400 W. Madison, Chicago 6, Ill.

P. H. Dempers Associates, 10 E. Huron Street, Chicago 11, Ill.

WESTERN — Chris Dunkle Associates, 740 South Western Avenue, Los Angeles 5, Calif.

SOUTH — J. D. Whitehead, J. H. Perry Associates, 411-12 Glenn Building, Atlanta 3, Georgia

AUDIOVISUAL INSTRUCTION is published monthly except July and August by the Department of Audiovisual Instruction of the National Education Association of the United States, 1201 16th Street, N.W., Washington 6, D. C. AUDIOVISUAL INSTRUCTION goes to all members of the Department; membership dues including AUDIOVISUAL INSTRUCTION, $7 ($2 of which goes to AUDIOVISUAL INSTRUCTION); Single copies of AUDIOVISUAL INSTRUCTION, 50 cents, annual subscription, $4. Second class postage paid at Washington, D. C. Copyright 1961, Department of Audiovisual Instruction, NEA. All articles are contributed.

EDITORIAL BOARD. Elaine Afton, Chester D. Babcock, James W. Brown, June Dilworth, Elizabeth Goiterman, Marshall Gunselman, Wanda Johnston, Virginia E. Kelly, Samuel Madden, Jack H. McKay, Barry Morris, Audrey Newman, Harry J. Skelly, William B. Sanborn, Pauline Smith, Robert E. Stepp, Constance Weinman, Paul Wendt.

DAVI EXECUTIVE COMMITTEE. Ernest Tiemann, President; Clyde K. Miller, President Elect; William H. Allen, Vice President; James D. Finn, Past President; Ralph H. Hall; Leone Lake; E. Dudley Parsons; A. W. VanderMeer.

EDITORIAL ADVISORY BOARD. David P. Barnard, Wisconsin; Robert Bauman, Minnesota; Harold W. Coman, Washington; Amo De Bernardis, Oregon; Earl Dible, California; George W. Forbes, New York; W. R. Fulton, Oklahoma; Carolyn Guss, Indiana; Ralph H. Hall, Ohio; Charles E. Foster, Florida; Kenneth McIntyre, North Carolina; Pierce E. Patterson, California; Lewis Saks, Michigan; David Silverstone, Connecticut; Beatrice S. Simmons, Illinois; Irving S. Spigle, North Dakota; Nelle Still, Georgia; Pinkus Sugarman, New York; Ernest Tiemann, Texas; A. W. VanderMeer, Pennsylvania; Elizabeth M. Wilson, Long Island.

STEREO *SOUND FOR THE CLASSROOM*

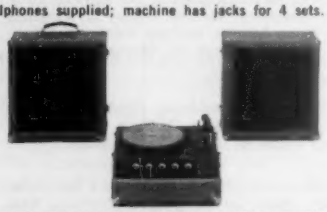
BY A STEREO PIONEER...

NEWCOMB

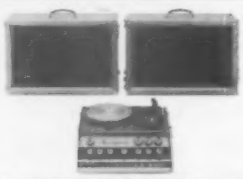
AVS-24 *STEREO/MONO*
PHONOGRAPH Gratifying compactness, astonishing full sound, the Newcomb AVS-24 plays stereo or mono at the flick of a switch, has compatible, high compliance ceramic cartridge; separate bass and treble tone controls; volume control; 24 watts peak, two-channel amplifier; two 9" oval dual-cone loudspeakers; choice of 3 other types of loudspeakers.

For stereo, too, Newcomb is the most logical source for the astute school equipment purchaser. Even before the invention of the present stereo disc, Newcomb was pioneering two-channel sound reproduction. Newcomb manufactured one of the very first (and still one of the finest) "3-D" high fidelity amplifiers to be placed on the market. It is this long experience in a field new to most that gives Newcomb stereo players the elusive quality of being "just right" for their purpose. Inspect Newcomb stereo equipment closely... listen carefully... yes, this is the way stereo equipment should be made. When you specify Newcomb stereo, you do so with full assurance that today's choice in retrospect will appear just as reasonable, just as correct five — and even ten — years from now.

AVS-1 STEREO/MONO HEADPHONE PHONOGRAPH permits the music student or researcher to listen in library or study room without disturbing others; plays any speed any size record up to 12". One pair of excellent stereo headphones supplied; machine has jacks for 4 sets.



AVS-1624 SERIES STEREO-MONO PORTABLE COMBINATION TRANSCRIPTION PLAYER/P.A. SYSTEMS. Though moderately powered, the AVS-1624 is highly effective. Plays any size record up to 17¼" masters. Two mike channels for stereo or monaural p.a. Choice of fixed or variable speed models; choice of 4 speaker systems.



TRS-1680 SERIES STEREO-MONO PORTABLE COMBINATION TRANSCRIPTION PLAYER/P.A. SYSTEMS. One of the most remarkable portable sound systems ever built, the TRS-1680 has the versatility, controls, and power to handle almost any assignment indoors or out. 80 watts peak, 3 mike inputs, separate mixing and tone controls for each mike and phono. Choice of 3 different reproducers.

NEWCOMB STEREO TAPE RECORDERS are the easiest of all tape machines to operate because they are cybernetically engineered. Tape transport control is centered in a telescoping joy stick. Operation is intuitive. Mixing controls, pointer-to-pointer meters, 4-digit counter. SM-310 half-track; SM-310-4 quarter-track.

NEWCOMB FM RADIOS are all equipped with outlet for multiplex adapter so they can be readily equipped to receive FM stereocasts. Newcomb makes three FM-only, three AM and FM, three AM-only table model radios.

FOR THE
INVARIABLE BEST
ALWAYS SPECIFY
NEWCOMB
ACCEPT NO SUBSTITUTE

Write for a complete description. Please specify types of equipment in which you are most interested.

NEWCOMB AUDIO PRODUCTS CO. Dept. AV-11, 6824 Lexington Avenue, Hollywood 38, California

Franklin Dunham: A pioneer whose contributions to music and broadcasting have been recognized here and abroad, Franklin Dunham died October 27 following a heart attack in his office. He had been chief of radio and television services at the U.S. Office of Education since 1950 and before that chief of radio since 1945. In 1958, NAEB awarded him its Annual Citation of Merit for "services to education and television covering a third of a century."

Call for Research Papers: If you want to present a research paper at the Kansas City Convention (March 25-30), contact John Moldstad, Indiana University, Bloomington. Papers should be in written form, requiring 20 to 30 minutes presentation time. They can deal with any phase of AV, but completed research studies will be given preference.

Are Foreign Languages Your Specialty? As chairman of the subcommittee on standards for equipment used in foreign language teaching, Elton Hocking is looking for DAVI members with first-hand information and experience in the foreign language field. Anyone who qualifies--and wants to serve--should contact Dr. Hocking, Head, Modern Foreign Language Department, Purdue University, Lafayette, Indiana.

Materials on Communism: John Kennan of SVE points out an omission in AVI's listings in the October issue: no reference was made to filmstrips. SVE offers two series: "Living in the Iron Curtain Countries Today," and "Living in the Soviet Union Today." Each series has seven filmstrips at $6.50 per filmstrip and $39.75 for the set. Both are suitable for the sixth grade and up. Author and chief photographer for the Iron Curtain series is Murray Lincoln Miller . . . A Selected Annotated Bibliography to Assist Teachers in Teaching About Communism is available for 25 cents from the National Council for the Social Studies, 1201 16th St., N.W., Washington 6. The approximately 35 entries were selected by Merrill F. Hartshorn, executive secretary and T. Marcus Gillespie, executive assistant, NCSS.

Membership Campaign: Florence Fan reports that 200 contact cards have reached the national office. Have you sent yours in? (See page 406, October AVI, if you missed reading about Carlton Erickson's "colossal procedure" for involving every DAVI member in this year's membership effort.) Dr. Fan also reports 114 new members during October. New membership pins designed around the DAVI logo will be sent to every DAVI member who gets a new member.

Fulton Named: William R. Fulton has been elected as AOTE representative to the Executive Committee of the American Association of Colleges for Teacher Education. The Committee's choice of Dr. Fulton recognizes his services to the AACTE coordinating committee and to its outgrowth, the Associated Organizations for Teacher Education.

It's Dean Larson Now: L.C. Larson received the congratulations of the national staff when he walked into the DAVI office one day last month. The newly appointed associate dean of the Indiana University Division of Extension explained that his new title enables him to work more directly with the central administration of the University and the deans of the other schools and divisions. It also means that the University recognizes the broad program developed by Dean Larson during the past 20 years as director of the audiovisual center and director of the School of Education's media division.

Invitation to Germany: Edwin M. Logan toured school systems in West Germany as a result of his activities with the International Relations Committee at the Miami Convention. The 30-day tour, which began October 8 at the West German Government's expense, included stops at Bonn, Cologne, Hamburg, Breman, Berlin, Munich, Stuttgart, and Frankfurt.

Testing TEMAC: The TEMAC materials used in the Roanoke experiment are on trial in the Warner Junior High School in Delaware this semester. A programed course in algebra is being offered to two sections of ninth-year students. One section is made up of 28 college preparatory students of proven ability; a second section includes 25 competent students from other curricula.

Kit on Programed Learning: Wilmington's Curriculum Service Center has assembled a loan kit of source materials on teaching machines and programed learning. Available to public school staff members and community groups, it contains two filmstrips and a number of books and articles. Among them are the Lumsdaine-Glaser volume, the Fry-Rigney AVCR supplement, and the April issue of AVI.

"fills a long-felt need"
— Henry Bowman, Ph.D., Department of Sociology, University of Texas
"highly recommended for discussion stimulation" — Audio-Visual Resource Guide
"hard-hitting realism, at once wise and challenging" — Bishop G. Bromley Oxnam
"remarkable sensitivity and objectivity" — W. Clark Ellzey, Professor, Stephens College
"every young person should see this film"
— Donald M. Maynard, Ph.D., Department of Religious Education, Boston University School of Theology

One Love–Conflicting Faiths makes sense.

And responsible persons the nation over are still expressing their excitement at the frankness, honesty, and clarity with which a most delicate subject is treated.

One Love—Conflicting Faiths is the story of a Protestant-Roman Catholic marriage. It truthfully uncovers the many pitfalls and dangers inherent in such a marriage: the problems of home life, child rearing, and religious practices.

It is recommended by *Audio-Visual Resource Guide* for instruction of senior highs through adults, including leaders, teachers, and parents.

It is available for rental at most audio-visual libraries; 16mm, 27 minutes, color - $9.00, B/W - $6.00.

See and show this dramatic event, then send us *your* review.

TRAFCO, 1525 McGavock Street, Nashville, Tennessee.

For information concerning purchase, write for free brochure.

Good Idea for a Door Prize: From Myrna Shoemate of Industry, Illinois, comes this notation along with $4 for an AVI subscription: "This subscription was given as a prize at our county teacher's meeting." The winner: E.H. Francis, Bardolph, Illinois.

Eighth Edition Coming Up: NAVA reports work begun on the 1962 Audiovisual Equipment Directory. Editor Jim Hulfish expects the eighth edition to be a complete revision of the current one and the largest to date. Meantime, the Directory's fame is spreading. NAVA News reported one request for the 1961 edition from Czechoslovakia.

Durable: At Twin Lakes, Wisconsin, the school board resisted all pressure to throw out McGuffey's Eclectic Reader. Angus Bothwell, the state superintendent, had called it a "museum piece"; others labelled it "outmoded," and "ancient." Two hundred townsmen organized a protest and the state threatened to cut off school aid. By listing the 82-year-old text as a "supplemental aid," the school board hoped to head off opposition.

Are You Visually Minded? If so, you have a chance to win a flying trip around the world. The NEA is cooperating with the sponsors of the Hall of Education in search of a symbol for American education. The symbol (whether a statue or some other artistic form) will grace the entrance of the Hall of Education at the New York World's Fair of 1964-65. Send your ideas to the Hall of Education, Symbol Search, International Fair Consultants, 10 Columbus Circle, New York 19. (Entries must be submitted before February 28, 1962. They must include a rough sketch and description concise enough to go on a single 8½ x 11 sheet. Be sure to give your educational address and title.) Other awards include a nationwide air tour as second prize and trips to the fair for five runners-up.

Photo Credits: Pages 435-36, courtesy of the author; pages 437-39, University of Wisconsin, Extension Division, Department of Photography; page 440, courtesy Los Angeles City Schools; pages 444-46, courtesy of the author; pages 447-48, courtesy of the author; pages 450-51, Norfolk County Public Schools; page 454, courtesy of the author; pages 456-57, Audiovisual Center, Purdue University.

PROFESSIONAL PLACEMENT

If you wish to use these columns to find employment or fill a position, please write to Robert C. Snider, Department of Audiovisual Instruction, 1201 16th Street, N.W., Washington 6, D.C. If you wish to investigate any of the opportunities listed below, address your inquiry to the assigned box number, in care of the Department of Audiovisual Instruction at the above address. Your letter must be addressed to one box number only. When it is received at DAVI headquarters your letter will be forwarded immediately to the employer or employee assigned to the box number indicated by you. Further correspondence will be directly between you and your prospective employer (or employee, as the case may be).

POSITIONS

Professor of Audiovisual Instruction: Man or woman with background and experience in audiovisual education or educational communications. Masters required, doctors preferred. College teaching experience preferable but will consider experience either as teacher or director of audiovisual program in public education system. Looking for candidate who will enjoy teaching undergraduate courses in AV education and cooperate well with other faculty members. Also desirable: ability to assist with preparation of graphic materials, ETV, and film library. Salary $6000-$9000. Open January 29. Box No. P-36.

Executive Administrator to Supervise and Coordinate Production of Educational Films: Unusual opportunity with newly formed division of major West Coast motion picture company for man or woman with experience in audiovisual administration. Bachelors degree preferred but not essential; experience in AV field most important requirement. Salary open. Will fill position immediately. Box No. P-37.

Executive Administrator to Coordinate Distribution of Educational Films: New division of large West Coast film company needs man or woman experienced in AV administration and/or distribution. Experience is most important requirement. Duties will be to coordinate distribution and sales efforts. Salary open. Will fill position immediately. Box No. P-38.

AV Specialists for Nigeria and Sierra Leone: Three men with teaching experience and strong background interest in theory, production, and use of audiovisual materials. 2 yr tours in Nigeria and Sierra Leone under ICA communications media contract with Indiana University AV Center. One immediate opening; two, February 1. $8000 to $12,000 plus housing, 25% overseas allowance, educational allowance for children, post allowance, travel for family and cost of shipping car and household goods. Box No. P-39.

IN THIS ISSUE

WHO WILL BE the educational engineers? Posed by W. W. Charters more than a decade ago, this is a question to stir new interest among leaders in the field who are examining the role of the audiovisualist. (See notes on the meeting of the Executive Committee, page 474.)

When Charters first put the question he was reacting to the preponderance of "idea men" in the education field. The idea man, he wrote in the *Educational Research Bulletin* for February 14, 1945, "does not know whether or not his idea is good because he has neither planned the operations for putting it to work nor tested it in the field of practice where he predicts it will work."

At the same time—in 1945—Charters recognized a countervailing trend among the many men and women in education who were interested in the "materialization of ideas." He found a growing body of specialists who were subjecting their ideas to proof before reporting them. "These are builders," he wrote. "They invent or accept ideas as the preliminary step to enjoying the deeper pleasure of producing programs and carrying them out. It is to these persons that the term, the educational engineer, might be applied."

"The educational engineer," he continued, "is interested in philosophy and theories and the situations from which ideas emerge, but he studies them primarily to get his bearings in attacking a problem."

Similar to Shayon's "pandemic man" in that he is at home both in the realm of theory and practice, Charter's educational engineer is more a man of action—less a go-between. [Although Shayon borrowed the "pandemic" concept from Professor W. H. Cowley of Stanford University, he was the first to apply it to the audiovisualist. In his speech to the 1961 DAVI Convention, he described the pandemic man as the individual who mediates between the "scout on the frontiers of knowledge" and the "practidemic" man who puts this knowledge to use.]

In 1951, writing again in the *Educational Research Bulletin* (December 12), Charters sees the age of the educational engineer clearly emerging. In this article he describes the educational engineer as anyone "who intelligently builds efficient methods of performance," that is, who defines objectives, plans, builds, operates, and measures efficiency. He characterizes the age as one in which there will be a shift from educational theory to development of techniques. The emphasis will be on the man who operates the tool and tries it out in practice. In short, this will be an age of research and experimentation, evaluation and measurement.

Charters thinks the field of educational engineering too large for individual initiative alone. It needs a concerted national attack, for which he suggests the U.S. Office of Education as the natural center. But at the same time he foresees a steadily increasing number of local centers of experimentation.

It is this aspect of Charter's concept—experimentation at the grassroots—that is echoed in our current issue. Here—as indicated by the quotes below—are examples of varying efforts at state, school and university level. How well do these experimenters typify Charter's educational engineer?

"The concepts upon which I base my use of tape recording circuits had their beginnings early in my teaching career." (Henderson, 454)

"My purpose was to study an approach to reading that utilizes background experiences about which the child may already converse in daily speech . . ." (Voland, page 443)

"If a school plant is to be equipped for open circuit ETV, is it worthwhile to spend a little more money to make it possible to originate closed circuit telecasts within the building?" (Duvall, page 450)

"At Oregon's newly established Center for Research on Teaching, pilot work has been initiated on a new approach to teacher education which utilizes motion picture technique to simulate classroom situations." (Kirsh, page 447)

"Recognizing the responsibility of the profession for a careful appraisal of the effects of NDEA, the California State Department of Education initiated a comprehensive plan for the evaluation of Title III . . ." (Johnson, page 459)

"One more electronic device—the dictation machine—has now come to the assistance of the teacher." (Lumsden, page 455)

"Current plans are to install a network of audio lines by which eventually the majority of the classrooms on the campus can, at the wish of the professor, be connected to tape centers in the individual buildings or to the consoles in the AV Center." (Miller, page 456)

"Along with theory the student should have an opportunity to apply his learnings in proper context. The courses in television production at Montana State College offer just such an opportunity." (Sekerak, page 435)

"English teachers have used their own creative abilities to develop techniques, have created many homespun, do-it-yourself devices to stir lagging students, and have adopted and adapted audiovisual aids to their needs." (Nunn, page 441)

STUDENTS MEET AUTOMATION HEAD ON

TV courses at Montana State College offer an opportunity for learning about technology in "integrated systems"

ROBERT M. SEKERAK

When this article was written last spring, the author was chairman of the Department of Film and Television at Montana State College, Bozeman. He has since joined the International Cooperation Administration in Ankara where he is educational advisor for USOM/Turkey.

Film and television majors work on animation clip for chemistry series. At Montana State College integrated courses are based on actual production projects.

MUCH HAS BEEN WRITTEN about this being a period of systems development. Automation and the atomic age tolerate no lost motion. If the educational process is to keep pace, it must gear itself to greater efficiency of operation. At least major institutions will have to incorporate the use of technological devices as standard operating procedure.

Though the "ivy tower" has its place in academic life, somewhere the student must face the necessity of meeting the deadlines of the push-button life ahead. A vital part of his education should be a first-hand contact with that which goes on behind the dials and levers. Along with theory he should have an opportunity to apply his learnings in proper context. The courses in television production at Montana State College offer just such an opportunity.

The Film and Television Department's offerings are designed to be mutually supporting. TV Design, Techniques, Basic Electronics, and Directing are all so arranged as to permit cooperative effort with the course in TV Production. The cluster of integrated courses is based upon some actual production project.

Last year a series of closed circuit courses were produced in beginning chemistry. Laboratory assistants and advanced majors in chemistry worked closely with the Film and TV classes in order to provide authoritative information when needed. Some of these chemistry specialists were enrolled in the TV classes while others participated on a consultant basis only. Thus, the best and latest techniques of both disciplines were brought to bear on any one lesson in chemistry. The "system" could be applied to instruction in any subject matter.

Television courses are coordinated so that students can carry out all the functions essential to the production of courses for the closed circuit system. TV students not only produce the programs, they create the sets and assist in the operation and maintenance of all the electronic gear that goes with television production. Each student is in his turn a technical director, lighting director, console operator, floor manager, set designer and student engineer. Each has his opportunity at total directing responsibilities. He learns first hand the intricacies of a complex system and the responsibilities of both supervisor and supervised. Each must consult with the other in every step of operation.

Under these conditions the student producing the program is the one who exerts pressure for resource material, not his instructor. When the student opens a book at this level he is at the peak of his academic

efficiency. He knows what information he needs and takes the most direct route to procure it. Even the average student becomes calculatingly thorough in his perusal of resource materials when he knows the full responsibility is on him.

His investigation cannot be shallow because he has a variety of assignments during the progress of any one course. No student is permitted to remain at a post such as lighting director or switcher after it has become purely routine.

Such a demanding experience as television instruction is of course preceded by overview courses and training in techniques. The student is not thrown into a situation until it is felt that he has achieved sufficient technical maturity. He is, however, expected to assume full responsibility for his segment of the production once he takes over.

Production students operate in a permissive atmosphere. Each has his own ideas on how a task is to be carried out. Despite the excellence of the techniques of his predecessor, each brings fresh ideas to bear. New methods are encouraged even though they may result in changes which disrupt an otherwise smoothly operating system. No single student, however, is permitted to carry out ideas which are so radical that they might detract from the effectiveness of the message. That type of experimentation is either referred to courses in which there is no audience to consider or is relegated to special projects.

Special problems courses are tailored to fit the needs of the advanced student who has completed the formal offerings of the Film and TV major. Because the Film and Television Department operates as an integrated whole, film clips are produced by the advanced major as special projects when they are needed for the television production. Advanced students also work with specialists (either staff or student) from such departments as Art, Home Economics, Engineering, Design and Architecture. Since each completed project opens new avenues of exploration, there is no stagnation and the horizon is pushed constantly forward. Trained under these conditions, the student is prepared for the fluid atmosphere now prevalent in technological life.

Here is a series of TV courses which embodies under one head all the coordination of the team approach and the systematic incorporation of the several disciplines mentioned above. It is a composite effort that succeeds in giving the learner information which has been enriched through its contact with a number of authoritative sources.

Through the services of faculty evaluation committees, the system at once provides greater authenticity and a check against thought control. Each program is viewed by a committee appointed from the subject matter area concerned. These committees meet periodically with representatives of the production staff to make certain that any weaknesses they point out are acted upon. Such experiences provide the student with two things: an opportunity to help knit a carefully synchronized production, and a first-hand insight into the administration of such a process.

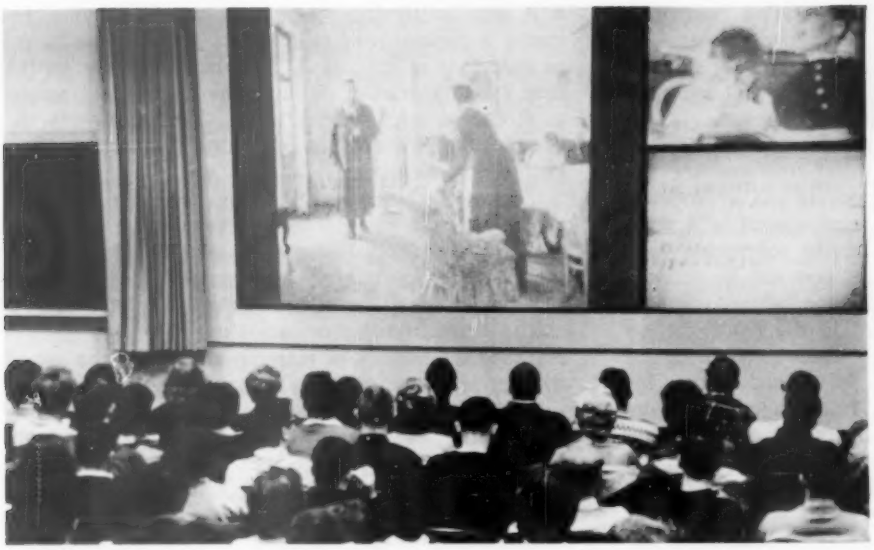
The foregoing instructional program embodies four major objectives:

- *Learning skills and techniques.* Besides getting an insight into the theories of communication, students directly associated with the production of closed circuit courses can assume their places in the field confident in their mastery of its technology. They are in a position to help control the progress of automation rather than living in dread that automation will control them.
- *Synthesis of information.* A conscious understanding of the need for depth in subject matter is developed by the complexities of production. If a Tower of Babel situation is to be avoided, student producers must be able to coordinate information from several disciplines.
- *Direct participation and feedback.* The student involved in production expresses his viewpoint during the planning stage, a form of feedback for the television teacher.
- *Understanding and refining the process.* All students who participate assist directly in the formulation of the whole approach. The constantly increasing number of college staff members who are made aware of the program increase the possibility of its universal adoption.

If universities are to gear themselves to a technological age, they must permit the student to work in an environment which embodies automation. In this way he becomes qualified to discriminate and evaluate.

Expanded logically, the same basic structure as the one described here can accommodate any form of visual or auditory message. Developed as an integral part of the structure of an educational institution or district, the system can make effective use of automated equipment and technological devices. Centralization of equipment is necessary for economic reasons. The accumulation of ideas from a number of sources and the committee safeguard can prevent regimentation and control of information. The basis appears to be in the coordination and integration of disciplines. ##

Planning sessions are scheduled periodically. Left to right are: TV professor, film and television assistant, art assistant, chemistry assistant, and director-engineer.



1. Split screen is focal point of system.

TELEMATION *AV Automatically Controlled*

RICHARD D. HUBBARD

Dr. Hubbard is assistant professor in the School of Education at the University of Wisconsin and production director of the Telemation Laboratory.

THE UNIVERSITY OF WISCONSIN is involved in an exciting project involving automatic control of audio-visual materials in an integrated system. Designed and built by the TelePrompTer Corporation of New York City, the system is centered around a device called TeleMation, hence, the name Telemation Laboratory for Room 116, Education Building.

An automated presentation, using five synchronized rear-screen slide projectors on a multiple screen, was created and operated for the U. S. Departments of State, Agriculture, and Commerce at the World Agricultural Fair, New Delhi, India, and was seen by more than a quarter of a million persons between December 1959, and February 1960.

The Wisconsin debut of the $33,000 system came in January 1961, when Michael Petrovich, professor of Russian History, gave a semi-automatic presentation in describing the semester's work and the geography of Russia. His class listened to the strains of Tchaikovsky's *1812 Overture,* heard the descriptive verbal explanation over the PA system and saw a well-planned sequence of maps, pictures, names, dates, charts and diagrams.

The focal point of the system is the tri-part screen used to present multiple visuals adjacent to one another (see illustration 1), thus displaying related segments of information and visually accenting important relationships.

Most of the equipment is arranged behind the screen (see illustration 2) with rear screen projection removing the distraction of operator and equipment noises. Located here are a Bell and Howell JAN model motion picture projector; a 3¼"x4" slide projector (TelePro 6000 with a 3000-watt incandescent bulb); two DuKane 2"x2" slide and filmstrip projectors; an opaque projector which can hold a teleprompter script; and a two-track stereo tape recorder built into the control panel. An overhead projector has been added to share the mechanized table with the 16mm and 3¼"x4" projectors. This table can be programed to roll into prefixed positions to center the picture on the large screen. Images from these three machines are projected through a double mirror system to shorten the throw distance.

The lectern (see illustration 3) is an integral part of the system and is equipped with an elevator to raise and lower the table for speakers of different heights. It has a clock, receptacles for microphones, and built-in lighting. A control panel mounted on the lectern (see illustration 4) is clearly marked and offers the speaker manual control of each machine in the system and of the house lights.

Four teleprompters (see illustration 5) may be utilized with any presentation. They roll text prepared with a special typewriter (see illustration 6) that prints letters one half inch high. Speed of script is regulated by a small hand control usually operated by a second person backstage who sees identical copy on the synchronized master prompter. The operator simply listens to the speaker and follows his delivery, stopping for side comments and continuing on cue.

A TeleMation unit (see illustration 7), or the

automation device, automatically controls the entire system when such a method of operation is desired. It can be used to activate a programed sequence of events during a lecture. The card reader (see illustration 8) is programed with punched cards that select the events when the TeleMation unit is triggered.

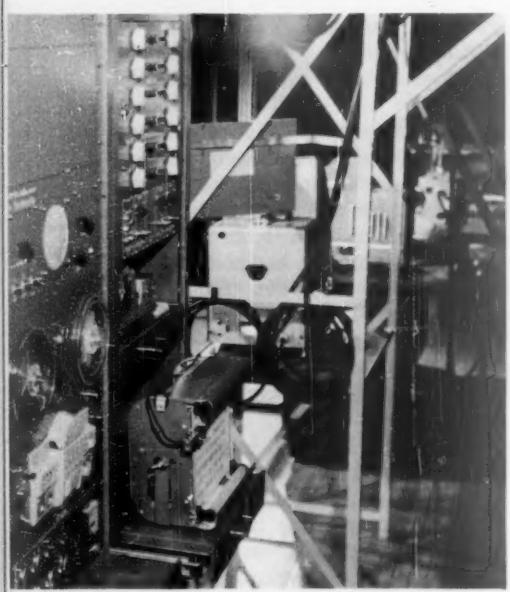
There are four methods of operating the system:

- Using the lectern control panel, the speaker has complete manual control by pushing the appropriate button to activate one projector or several at a time.
- For semi-automatic operation, the telemation card reader is programed. Cards are punched to activate one machine or three, plus audio and lighting controls, simultaneously. They are placed in the reader before the lecture, and the speaker only needs to push the red trigger button at each of the predetermined spots in his presentation. This activates the TeleMation unit, giving the desired visual and audio effects.
- One completely automated method requires the use of the teleprompter. The master script is cued with a conductive strip placed in line with a word chosen as the cue for particular effects (see illustration 9). As the paper rolls, the cue word and its accompanying cue strip are brought to the indicator arrow. The arrow closes a circuit to the TeleMation unit upon contact with the strip, the unit is triggered, the card reader selects the wanted effect and the equipment is turned on.
- A final method, a completely automated one, includes a pre-recorded tape of the lecture. Cue strips, as described in method 3, are placed directly on the tape (see illustration 10) and the same effect results as from the teleprompter script. This eliminates the need for the physical presence of the speaker and offers intriguing possibilities.

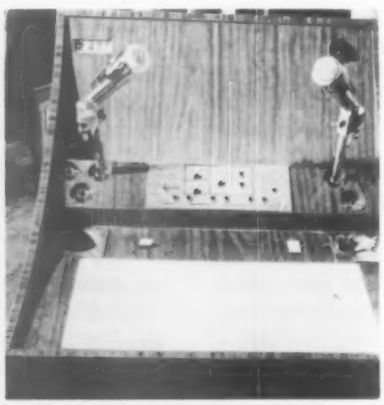
The method of operation will ordinarily be the choice of the lecturer. These techniques are still being studied and refined. Because the system is flexible and adaptable to many needs and situations, imagination becomes the real key to successful use of telemation.

The Telemation Laboratory Project focuses on several related problems of learning inherent in the use of an integrated, automatically controlled system of audio-visual equipment for instructional purposes at the college level. These problems include verbal-visual load, relative effectiveness of the four methods of operation, influence of size of visual, comparative effectiveness of multiple screen *vs* single-screen presentation, and effect of telemation on the formation of learning habits.

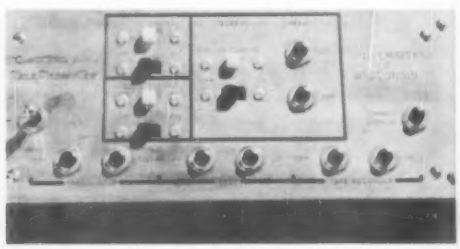
Six University courses are being planned for programing, both as to content and visuals. They are history, mathematics, health education, educational psychology, art, and instructional methods. Programing



2. Backstage view of telemation equipment

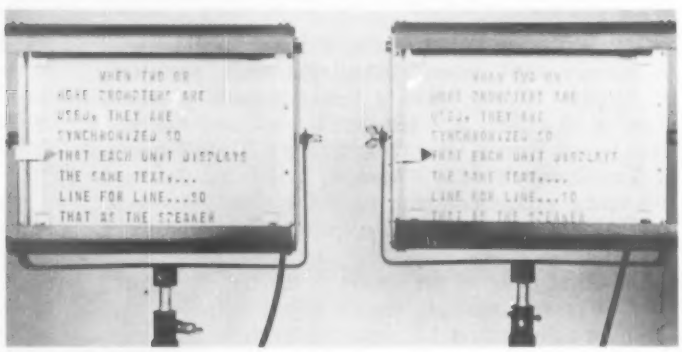


3. Lectern in front of classroom



4. Close-up of lectern panel

5. Prompters with letters ½" high are located in front of lectern



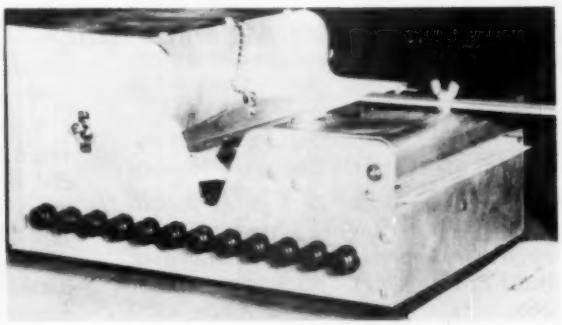
via telemation, quite analogous to that for educational television, is approached in a different manner with each professor. Basic to any approach is outlining a semester's work or a series of lectures. The professor collects his visuals and he and the program director evaluate them as to appropriateness (clarity, size, color, unique contribution, and other such factors). They determine the best means of showing the information in question, whether film clip, slide, opaque material, overhead overlay, or other means. Films are previewed to select valuable portions and music is chosen for setting the mood or for inclusion in the lecture. Pictures, cartoons, graphs, charts, and other graphics which do not exist are drawn by the artist. All still pictures are finally photographed in color.

Visuals are then put into sequence for accompanying the text, cards are punched for the special effects, and the completed program rehearsed in the laboratory. Following this, and according to the professor's needs, script may be typed and cued or the lecture taped and cued. The excitement of giving the actual lesson approaches that experienced when going "on the air."

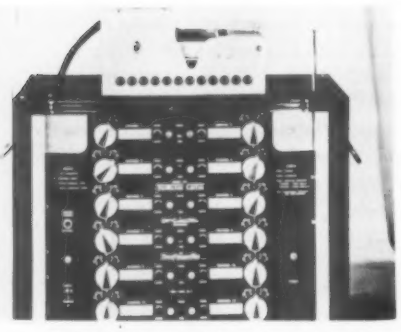
As the initial research phase now gets under way, certain reactions to telemation are being expressed. Paul W. Eberman, associate dean of the University's School of Education and director of the Telemation Project, says: "We are attempting to make large-group lectures as effective as possible and to explore a variety of uses for audiovisual equipment in the classroom." He also states that six classes with a total of 600 to 800 students are scheduled to be taught with the system this fall. It is important to note that, because this type of programing permits several professors to share their competencies in a single course, it will lend itself to team teaching.

Professor John Guy Fowlkes, a director of the Wisconsin Improvement Program, says: "The system has exceeded our expectations; but we will continue to evaluate it on several levels in an effort to determine, among other things, its effectiveness in improving factual learning and interpretative power." He adds: "The three-part screen enables us to capitalize on the Gestalt theory of learning . . . learning by configuration or pattern rather than by isolated elements. While one image is on the main screen illustrating the professor's remarks, others can be shown simultaneously on the other two. Perhaps the phenomenon of subliminal learning, learning unconsciously, may also come from this multi-screen presentation." Concluding, Professor Fowlkes points out that a tape lecture of 50 minutes can be boiled down to 20 telemation minutes with no loss of material or loss of learning by students. ##

6. Script is prepared on Teleprompter electric typewriter

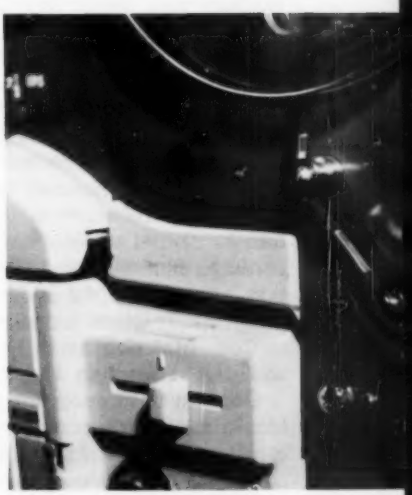


8. Card reader with punched program sequence



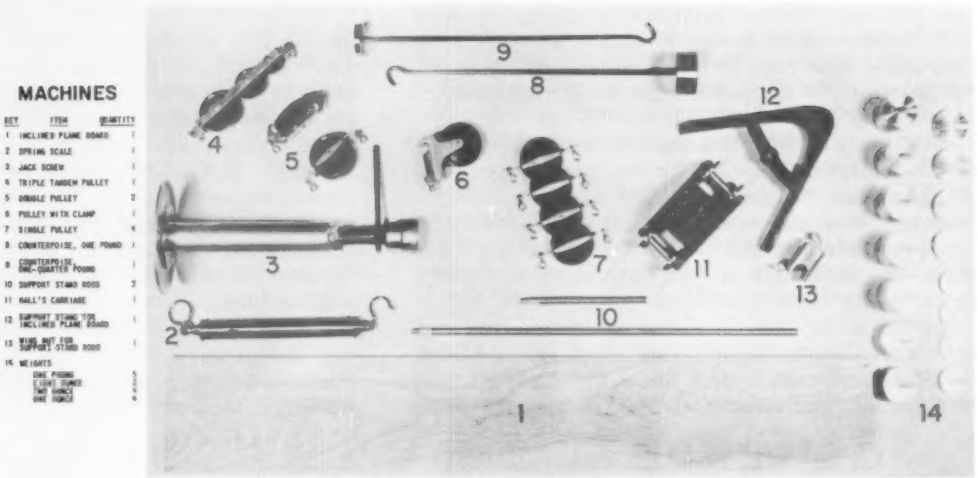
7. Telemation control unit for automatic control of equipment

9. Conductive strip on master script for triggering telemation



10. Conductive strip on tape offers complete automation

THE AUDIOVISUAL KIT



Los Angeles finds a practical way of organizing materials

PATSY SEELEY AND GENE WHITE

Miss Seeley is a consultant in the Division of Audiovisual Education of the Los Angeles County Schools; Mr. White is elementary supervisor in the Audiovisual Aids Section of the Los Angeles City Schools.

"YOU FORGOT TO SEND ME the whale's tooth and the filmstrip on Arctic birds . . ." How many times have teachers said things like this to you—or how many times have you tried to fill a teacher's request for "the materials you have on Africa" only to find all of the study prints on the Congo already in circulation. These are fairly common problems in libraries today as requests for audiovisual aids increase.

As districts grow, the need for instructional materials in many cases increases beyond financial resources. Administrators, eager to stretch their budget dollars, turn to central depositories. Collecting films, tape recordings, filmstrips, and study prints in a central location, although helpful in one respect, gives rise to other problems. Teachers accustomed to browsing feel handicapped. Materials must be ordered long in advance and it is difficult to find time to adequately preview.

One way of meeting this problem has been to assemble kits of instructional aids related to particular topics, as for example, social studies materials packaged according to country, or measuring devices and geometric forms in a mathematics kit.

The enthusiastic acceptance of this type of audiovisual resource in Los Angeles can be attributed to several obvious advantages. A thoughtfully prepared kit offers a variety of useful materials to strengthen and supplement a specific area of study; it is a package of related materials organized to simplify procurement; it provides sequential materials geared directly to curricular need; it offers a collection of "ready made" lessons for inexperienced teachers and flexible resource materials for experienced, inventive teachers.

In the Los Angeles City Schools, widespread use of AV kits began in March 1952 with the introduction of a fishing kit; after nearly ten years it continues to be among the most popular of collections. Members of the California fishing community donated many authentic items, including both new fish nets and some that had been used long enough to capture the smells of the sea. Today, about 200 classrooms per month order the fishing kits as a supplement to their study of the harbor and local industry.

Another social studies kit heralded the advent of our 50th state. *Hawaii—Crossroads of the Pacific* is the work of Rosemary Sawyer, currently audiovisual specialist with the Los Angeles City Schools. During a year as exchange teacher on the islands, she was able to capture the spirit of Hawaiian life in an instructional kit which includes eight color filmstrips, a recording of authentic sounds and music of the islands, and samples of tapa cloth, lauhala, coral, seashells, and lava. A complete teachers' resource guide is included.

A kit unique to Los Angeles City schools contains the original sketches which Conrad Buff made for the book, *Hurry, Skurry, and Flurry,* written by his wife, Mary. In addition to the original drawings, the kit includes a complete copy of the book and an illustrated autobiography of this talented artist-writer team. Other literature appreciation kits of this nature are planned.

Some years ago Gene White designed a kit for science as an extension of his radio series called "Let's Explore." Called *Adventures With Sound,* it contains recordings from the radio series plus motivational study prints, a teaching guide, and science equipment needed to perform experiments suggested in the guide.

Four new science kits, facilitated by NDEA funds, will appear this year in the areas of "machines," "weather," "light and color," and "electricity and magnetism." A detailed guide will accompany each kit and visualized labels in the lid of each container will identify their contents. Developed cooperatively by the audiovisual and curriculum sections of the Los Angeles City Schools, 100 copies of each of these kits will be placed in the hands of inservice training leaders during the first semester of 1961-62. The photo gives a sampling of their contents.

Another type of audiovisual kit serves a different but related purpose. School administrators faced with large numbers of new teachers have found it difficult to provide sufficient supervisory assistance. One answer to requests for help in designing aids and practice materials has been to have experienced teachers and supervisors develop kits of such materials. A mathematics kit, for instance, is composed of practice materials to provide drill on the four fundamental figures. A reading kit contains word practice aids and materials for teaching word comprehension. Principles borrow these kits and set up building workshops where teachers use the models for making their own materials.

Commercially prepared kits especially in the fields of social studies and science are also finding ready acceptance. Perhaps, however, the most useful kits will continue to be those developed by teachers, curriculum consultants and members of the community working together to meet local needs. The possibilities though great are not without hazards. In checking with experienced kit makers, the following cautions and suggestions were expressed:

- Before focusing on materials and devices, think through the goals the teacher wants to encourage; the learning activities she wants achieved.
- Recognize the classroom teacher's need for materials to challenge and stimulate children with different interests, abilities, and backgrounds.
- Be discriminating in selecting realia for social studies kits on other countries or communities. Sometimes items readily available are not truly representative.
- Provide materials which will lead to various learning activities rather than one pre-determined project.
- Don't "kitify" all your materials. Encourage teachers to continue to make their own selections to fit a particular need. ##

■ *programing*

AN ENGLISH TEACHER LOOKS AT PROGRAMED LEARNING

GLADYS NUNN

LIKE ENGLISH TEACHERS EVERYWHERE, those at Central High School, Muskogee, Oklahoma, are faced with students of diverse backgrounds, interest levels, and ability. Although Central has a program of grouping, even teachers of these special classes find the same diversity. Add to this the heavy teaching load, the problem of grading written work, and you can understand the zeal with which English teachers try new devices to help themselves and their students do better jobs of teaching and learning.

English teachers have used their own creative abilities to develop techniques, have created many homespun, do-it-yourself devices to stir lagging students, and have adopted and adapted audiovisual aids to their needs. They have been alert to developments in commercial products and have eyed teaching machines, teacher aides, clerical help, team teaching, and proposals for programed materials.

Among commercial materials is a publication, *English 2600,* written by Joseph C. Blumental and published by Harcourt, Brace. Each lesson consists of a series of brief, simple steps, or frames, through which the student reasons his way. Each step calls for a written response. Correct answers are given on the next page, enabling the student to immediately discover his mistake and correct it. The author emphasizes that this immediate check of the answer re-enforces the correct form or principle on the brain and contributes to errorless learning. Each page contains six alternate bands of gray and white frames which make possible 2632 steps in learning grammar and usage. The book contains 11 units.

In order to determine its value, *English 2600* was used on an experimental basis in a senior English class at Central High School during the past year. The class consisted of 22 pupils whose IQ's ranged from 83 to

The author, who teaches English at Central High School, Muskogee, Oklahoma, is president of the Oklahoma Classroom Teachers.

135 with the usual student types—the interested and distinterested; the inadequately, adequately, and excellently prepared; the enthusiastic college bound; the introverted; the extroverted; and so on.

To establish criteria for evaluation, another class comparable to Section II was selected. This group used a self-directing workbook of another type, designed to review seniors in the fundamentals of grammar and usage. The workbook had been planned as a terminal course as well as a review for the college bound.

Section II discussed *English 2600* and voted to participate in the experiment. This was important since the text is designed for self-improvement, and each student must be willing to make a maximum effort to benefit himself by conscientious application.

The following pattern was set up for both individual and group activity.

1. Each student must work as rapidly as he could.
2. The teacher would be available for individual help.
3. Each unit must be completed by a specific date.
4. Students must make notes on material they did not understand.
5. On a specific day preceding a test on a particular unit, the class would discuss these notes.
6. In these discussions the material in the unit would be related to more complex phases of grammar and usage not common to both books.
7. A few additional exercises to emphasize these phases would be undertaken by both sections.
8. Each student would be required to take the tests furnished with the texts. He would score them himself and correct the errors.
9. Following these steps, both sections would be required to take a test covering the same unit, but prepared by the teacher.
10. These results would be compared with errors made on the frames and on the commercial tests.
11. Each student would be required to make a progress chart showing his achievement on the commercial test and on those prepared by the teacher.

Before beginning the work each class was given two diagnostic tests—one on the eighth grade level and one on the eleventh. The weaknesses were surprisingly similar. Both sections needed review on correct usage of verbs, pronouns, verbals, adverbs, adjectives, and conjunctions. Their impressions were hazy, and in many cases there was a glib response regarding a principle but no ability to apply it in any particular framework.

After following the agreed-upon plan for one semester, results were tabulated. Students using *English 2600* averaged 95 percent on the commercial tests, but the average dropped to 80 percent on those prepared by the teacher. Section III using the regular workbook averaged 87 percent on the workbook tests and 89 plus on the test prepared by the teacher for both sections.

There were several reasons for this difference. In *2600* the steps were so easy and so gradual that the tendency was to cover the material too rapidly. A minimum of thinking was required. The tests were written with the same simplicity as the frames enabling the slowest students to make good scores. However those written by the teacher, while embodying the same principles of grammar and usage, were somewhat more complex. Some students waited until time for the class discussion to rush through the frames and be ready for the test. They had nothing about which to confer with the teacher or participate in discussions, since they had not taken time to relate the steps to more complex phases of grammar.

Student evaluations (unsigned) revealed that:

1. They enjoyed *2600*; they felt they had reviewed simple, basic fundamentals; in some cases they had actually learned and understood certain structures and their development for the first time.

2. They felt the book would be excellent for Grades 5 and 6, junior high school, and for special high school classes in remedial usage and grammar. For the average high school class, they recommended a supplementary book, set up in the same style, but which would project basic principles into their more complicated uses. For example, Unit 3: "Building Better Sentences" explains *ing* words to combine ideas, but does not project the material to the gerund and participle. This, they suggested, could be covered in a supplementary manual, optional according to individual needs.

3. They agreed generally that the material was good and admitted that working mechanically without much thought accounted for some low scores.

4. They suggested that portions of the book might be optional for the better prepared pupils and that they might progress to a more difficult section presented in the same step-by-step manner. If however they found themselves having difficulty they could go back to the elementary section. The units on pronouns, capitals, and punctuation were mentioned favorably most often.

In general the teacher agreed with their evaluations, and they agreed with her that they had corrected their answers without analyzing their mistakes. She felt that *English 2600* would be excellent for a class in remedial English since the explanation and the gradual step-by-step process are brief and specifically related to a single developing principle. The vocabulary is suitable for any level above the fourth grade. The lessons are free from extraneous material and the involved explanations so confusing to pupils on any level.

The teacher would not recommend *English 2600* for a class of the type that participated in the experiment. Some pupils made definite progress, but the text was inadequate for others. The teacher was required to provide much supplementary teaching which actually added to the problem of planning. Since the work is individual, single copies of *2600* could be used to advantage by inadequately prepared students, provided the teacher could arrange conference time. Diagnostic tests during the first week of school would determine which students needed help. If these students would work their way thoughtfully through the material, there is no doubt but what *English 2600* could be effective as a remedial tool. The experiment at Central High proved that there is a definite place for *English 2600* in any school designed to satisfy the individual needs of students. ##

FILMS & FILMSTRIPS SPARK THE READING PROGRAM

DELORES VOLAND

Miss Voland is a primary teacher in the U. S. Grant School, Sheboygan, Wisconsin. She wishes to acknowledge the contribution of Harry P. Zimmerman, AV director at the University of Wisconsin, who "encouraged, expedited, and acted as consultant" for both the article and project it describes.

LAST YEAR I undertook a research project involving films and filmstrips recommended by Encyclopaedia Britannica Films to supplement two basic reading texts for first-graders. My purpose was to study an approach to reading that utilizes background experiences about which the child may already converse in daily speech, but which at the same time supplies an additional awareness of their meanings through visual materials.

We used the visuals in the first step in learning to read—referred to in most manuals as "preparing for reading." The purpose of this step is to get the children's attention, establish background for understanding the story, introduce new words, and stir up an eagerness to read. This is also where we relate the story to the children's experiences.

By means of the controlled visuals used at this time, the vocabulary takes on meaning suggested by the characters and objects in the film or filmstrips. The new vocabulary is either printed on the blackboard or presented by means of word cards, then used in the group's own creative story. This procedure employs the previously learned vocabulary, the newly presented words, and familiar spoken words now put into print in meaningful situations. This first step in reading is followed by three others—interpreting the story, extending skills and abilities, and extending interests.

Twenty-one first-graders participated in our one-year program at Sheboygan's U. S. Grant School. At the end of the year, the Gates Reading Tests indicated a normal growth curve with high scores of nine years and two months; the mode, eight years and one month; and low score, seven years and eight months. This was the range of reading ages, but the creativity of the children could not be tested. The latter, however, proved to be the most rewarding aspect of the whole year's program.

The Bureau of Audiovisual Instruction at the University of Wisconsin furnished the visual materials. The actual film rental value was approximately $85 and the filmstrips for the year's program cost about $115. The two basic reading texts were Ginn Company and Scott, Foresman. The morning reading classes used the basic readers while the afternoon reading session was individualized by approximately 15 other reading books based on difficulty and sequence.

The method of dictation was based on the procedure outlined in Chapter 12, "Beginnings of Written Language" in *The Language Arts in the Elementary School* by Ruth Strickland (Heath, 1957). It follows this pattern:

1. The first step is writing down spontaneous expression of ideas. The teacher takes the material down exactly as the child gives it or assumes responsibility for arranging it into readable units.

Example: Asking questions to direct attention to certain desired points.

Teacher: What did the people see on the river?
Child: *Boats, boats, boats.*
Teacher: What are the sizes of the boats?
Child: *Some are big boats.*
Some are little boats.
There are many, many boats.

The italicized sentences become the group story, and the vocabulary is used readily and with meaning. The new words for this lesson were *big* and *boats*.

2. In the second dictation step, the children readily express their own ideas in thought units or sentences and the teacher now can write many of them down verbatim without too many questions.

3. As children become even more familiar with the group-dictating method, attention is given to punctuation and the mechanics of writing. ("This is the end of the sentence, so we'll put a word stop sign here. It is called a period.")

4. Pupils begin to learn suitable and interesting ways of expressing their feelings to make the story more interesting.

5. Additional time is used for much individual pupil-teacher dictation which encourages an individual style of writing.

6. At the end of the year, many children write their own stories for their film and filmstrip story books. The stress is still on enjoyment and meaning of the story.

The film showings were conducted on the premise that group discussion is one of the most valuable techniques to use with films. We discussed immediately the contents of the films and the questions it raised. The following day we showed the film again to reinforce learnings.

Among activities inspired by the reading program were these:

- We had each child bring a plastic freezer box from home, at least six inches high. In it we placed miniature (3″ x 1″) word cards with each day's new vocabulary. The children can take these home for word games with the family or use them during their free time. The cards give children their earliest pleasure in

creating their own sentences and stories. (At the fall conferences for parents, many mentioned the size of the word cards and the ease with which they could be used to check children's accuracy.) On Fridays we let each child select three words they had heard or seen during the week. These were put on cards of colored construction paper to help differentiate them from the daily vocabulary.

- Some of our art projects centered around illustrating "surprise sentences" about the films. It was interesting to note the awareness of detail and color shown by the whole group, such as five fingers on a hand, buttons on a dress, stripes, plaids, and so on. There were even beginnings of color blends quite early. Our art supervisor was impressed by such evidence of mature creativity and particularly by the fact that it continued throughout the year.

- At Christmas time, each child was asked to come up to the teacher and whisper a favorite character from either a library book, one of the reading books, the weekly reader, or other reading material. No two children chose the same character. Although we may have had two dogs, each had a different personality. We made puppets of the characters chosen, and each child was assigned a special time to dictate a short story about him. A day was set aside for the children to read their stories and act them out with their puppets.

- The film's sound track was used in music appreciation and listening activities. *Zoo Animals* was especially good for this purpose. No picture was shown, but the children could associate the heavy, loud music with large animals and the quick, gay music reminded them of monkeys and birds. They were asked to discriminate even more by identifying the animals. At this juncture the picture was projected for a quick checkup. If the choice of animal was a wrong one, the machine was stopped and the clues to the right choice discussed.

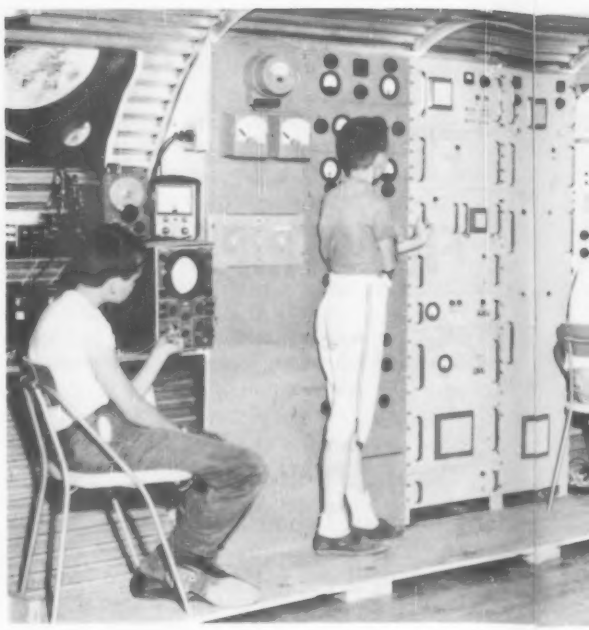
My findings during this year verified the fact that films and filmstrips are very helpful for sparking the reading program. They help provide readiness for the language arts skills and give opportunities for individual differences, creativity, and personal satisfaction.

Both teacher and pupils had a hand in planning our individualized reading program. We had organized classes and group instruction to insure interest and skill development, but we also encouraged wide reading and special study projects. All the books involved were selected under the teacher's guidance. But the book was one the pupil wanted to read and could read with a minimum of adult help.

Last year's reading program was one of the most rewarding for both teacher and pupils, and—as the following remarks attest—for parents.

"This year's reading program helped Randy to see and hear things that would have gone past him had he not been exposed to so many interesting activities in connection with the films and filmstrips."

"The other night Jeffrey surprised the whole family by picking up the newspaper and reading parts of the article about the first astronaut's successful flight and telling us all about it. We all thought that was mighty good for a seven-year-old!" ##

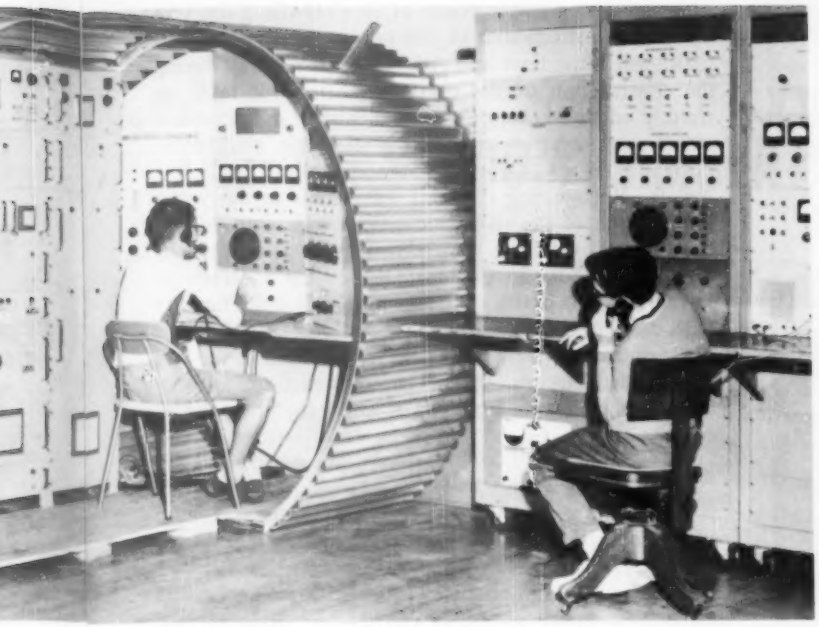


PROJECT MARSFLIGHT

RICHARD A. IBISON

THE Marsflight simulator project was initiated and directed by the author, who in addition to his duties as principal engineering scientist at Electronic Communications, Inc., is the volunteer instructor of astronautics at St. Petersburg's Science Center. Recognizing that experiments with homemade rockets were strongly disapproved by the American Rocket Society and by other scientific and educational groups, Dr. Ibison developed an alternate approach to youth education in astronautics which he named Project Marsflight. An essential feature of the project is the construction and utilization of inexpensive multi-man spaceship simulators. A description of how a youth group can construct a simple yet scientifically and educationally useful spaceship simulator for less than $75 (plus materials available free in most communities) will be given in a textbook which Dr. Ibison is writing in conjunction with the American Rocket Society's youth program.

Inside the giant spaceship simulator, Marsflight, the occupants were tense. "Ready for takeoff from Mars," called the captain, over his radio link with earth. He pressed a series of colored transilluminated buttons on the elaborate pilot's console of the spacecraft cabin. Immediately a complex electromechanical programer took over, checking out the numerous systems in the spacecraft and the final sequence of electronic operations required for takeoff. Where necessary the pilot and other crew members adjusted controls until all sub-system lights were green. At that moment a buzzer sounded, indicating the beginning of countdown with transilluminated blue lights on the console marking its progress: ten seconds, nine seconds . . .



Occupants of simulated spaceship, Marsflight, prepare for final takeoff.

Astronautics After School

one second . . . takeoff. To protect themselves against the effects of the thrust the captain and crew remained in their contour chairs for some minutes. Then they resumed their normal duties, checking the numerous panels of instrumentation, performing maintenance when necessary, preparing food, and conducting additional scientific research studies pertinent to their several specialties.

STRANGELY ENOUGH, the foregoing is not from a space fiction magazine, but represents the adventures of a group of teen-agers in St. Petersburg, Florida, who took several simulated "flights" to the moon and Mars this year in the giant spaceship simulator, Marsflight. In these flights, they operated real controls and activated live circuits during takeoff from the earth, simulated landings on the moon and Mars, and return to this planet. *Life Magazine* and other news media covered the lengthy vigils maintained by America's youngest astronauts in the Marsflight, which resembles the latest two-man Air Force simulator at the School of Aviation Medicine.

The Marsflight simulator was not produced as a major effort of the National Aeronautics and Space Administration (NASA) or as a project of the military services, but rather represents a community service project conducted under the auspices of The Science Center of St. Petersburg, Inc., a non-profit educational institution for youth which supplements the science instruction provided by the public schools. Possessing one of the country's few flourishing science centers through which to channel the science interests of its youth, St. Petersburg has amply demonstrated what a well conceived and implemented program of this kind can achieve with the completion of this authentic, operational spaceflight simulator.

Unlike the Air Force simulator, which was designed primarily to facilitate bio-medical studies, the Marsflight also provides a means of investigating many of the human activities involved in maintaining as well as operating a vast array of electronic equipment during a simulated flight into space.

Some of the advanced features of the Marsflight simulator include:

- Provision of electronic devices and circuits to permit personnel at the "ground station" to set up numerous maintenance and operational problems for the astronauts to solve;
- An advanced and complicated pilot's console designed in accordance with human engineering principles;
- Provision of numerous racks of electronic instrumentation on the inside of the spaceship cabin;
- Two-way radio communication between the cabin and the ground station;
- An automatic countdown programer with master control over the numerous displays and circuits during takeoff from the moon or other planets;
- A sophisticated navigational subsystem with numerous controls and cathode ray tube displays;
- An electronics workshop equipped with standard electronic test equipment such as an oscilloscope, vacuum tube voltmeter, signal generator, etc.;

Gregory Knight, St. Petersburg, acts as ground station operator during simulated flight into space.

• A bio-medical laboratory equipped with a laboratory-type oil immersion microscope, standard laboratory reagents, and other required apparatus needed for studies in bio-astronautics.

There were three formidable obstacles to construction of the Marsflight simulator. First, the Science Center's astronautics group had only $50 in the budget; second, the average age of the boys and girls was 12 years; and third, the simulator had to be completed in five weeks in order to have it ready for display at a certain public exhibition. Fortunately, various civic-minded individuals of St. Petersburg, including engineers and technicians at Electronics Communications, Inc., thought the situation not impossible. Through their combined efforts, the simulator was ready in exactly five weeks—with the last wire in place just 10 minutes before the public exhibition was to begin.

Since engineering assistance and most materials were provided free, the simulator was produced for only $402.78. The latter figure is deceptive, however, for the simulator's true value has been estimated at over $75,000—which represents a sizable donation of time and materials by the citizens of St. Petersburg.

Never has a more heterogeneous group been involved in a community project of this type. Participants varied with respect to formal education from seventh graders to scientists and physicians; in financial background, from boys whose families had limited means to millionaires; in occupation, from schoolboy paper carriers, to company presidents. All were inspired by one objective—to give the youth of St. Petersburg the best training in astronautics in this country.

Although the boys and girls participated fully during the construction of the simulator "shell," it must be frankly admitted that they were furnished much professional assistance in the systems planning and in the design and construction of the numerous electronic panels. Recognizing that this was unfair to the youth group, each of the electronic panels was removed following the exhibition, torn down and rewired by the boys at the Science Center. One of the most unbelievable aspects of this simulator project was the rapidity with which this group of young boys learned the details of the intricate wiring. In the case of certain of the less complicated circuits, they even improved on the circuitry—changing it from "two wire" to "three wire" circuits.

A Relatively Simple Device

In certain respects, it was unfortunate that (because of the energetic community effort) the Marsflight turned out to be as complicated and sophisticated as it is. Its complexity tends to obscure the fact that it is relatively easy for a youth group to construct a device which performs the essential functions of a spaceship simulator by utilizing resources available in their community.

A spaceship simulator need consist only of an enclosure to represent the cabin, a pilot's console which may consist of a board on which are attached switches, meters, and lights, a provision for sleeping and cooking, and an external control station somewhat similar to the pilot's console. Means of communication must also be provided between the cabin and the external control station.

Practically any youth group can devise such a simple simulator, and with the aid of adults in their community and local industry, construct a more elaborate simulator such as Marsflight. Once the simulator is developed, youth groups can conduct a variety of interesting and educational studies in astronautics. In addition to numerous studies with the simulator itself, each of the simulator's basic sub-systems, such as communications, navigation, and propulsion, can be studied in greater detail with the use of additional laboratory-type equipment. A proposal has been made by the author to the National Council of the Boy Scouts of America that a Space Explorer program be initiated whose "core" would consist of construction of an inexpensive spaceship simulator, but whose program would also include numerous additional projects and activities in astronautics. Various other groups have also shown interest in this new approach to astronautical youth education.

In summary, Project Marsflight has certain important implications which may interest youth educators and which may affect our national security in this space age: First, it represents a new and interesting means of providing astronautical education for youth and consequently increasing our future capabilities in astronautics. Second, the simulator itself possesses certain advanced technical features which might well be elaborated on in the construction of multi-man simulators. Finally this project shows what can be accomplished in astronautics by local community efforts.

THE CLASSROOM SIMULATOR

An audiovisual environment for practice teaching

BERT Y. KERSH

The author is acting director of TEACHING RESEARCH, *the newly formed research center of the Oregon State System of Higher Education located at Monmouth.*

BEGINNING TEACHERS have relatively little opportunity to practice teaching skills under expert supervision. The shortage of qualified teachers, limited training facilities, and scarcity of expert supervisors dictate that new methods be found to provide systematic opportunities for practice teaching.

At Oregon's newly established Center for Research on Teaching, now called TEACHING RESEARCH, pilot work has been initiated on a new approach to teacher education which utilizes motion picture techniques to simulate classroom situations. A facility called the Classroom Simulator has been built and techniques developed for simulating a variety of classroom situations to which the student teacher may react. Multiple projection techniques are used to present realistic problems to which the learner is asked to react as if he were actually in a classroom. Depending on the reaction of the student teacher, a supervisor projects a selected "feedback sequence" which is a short film showing the pupils' predicted reactions.

In the Classroom Simulator the student teacher is able to practice classroom teaching behavior with the knowledge that only a few objective observers are present. He can practice repeatedly, under direct supervision by interacting with a filmed classroom. Any type of practical problem in classroom management and in group or individual instructional methods can be created. It is expected that by providing the student with opportunities to practice the same activity in a great variety of different contexts, the practice effects may be generalized more readily and transferred more effectively to the actual classroom situation. Through the use of the feedback sequences, it is possible to give the learner immediate knowledge of the results in a manner similar to that of an actual classroom.

Figure 1 diagrams a plan view of the prototype Classroom Simulator which has been developed at TEACHING RESEARCH. As is illustrated, the learner stands in a position relatively close to a large central

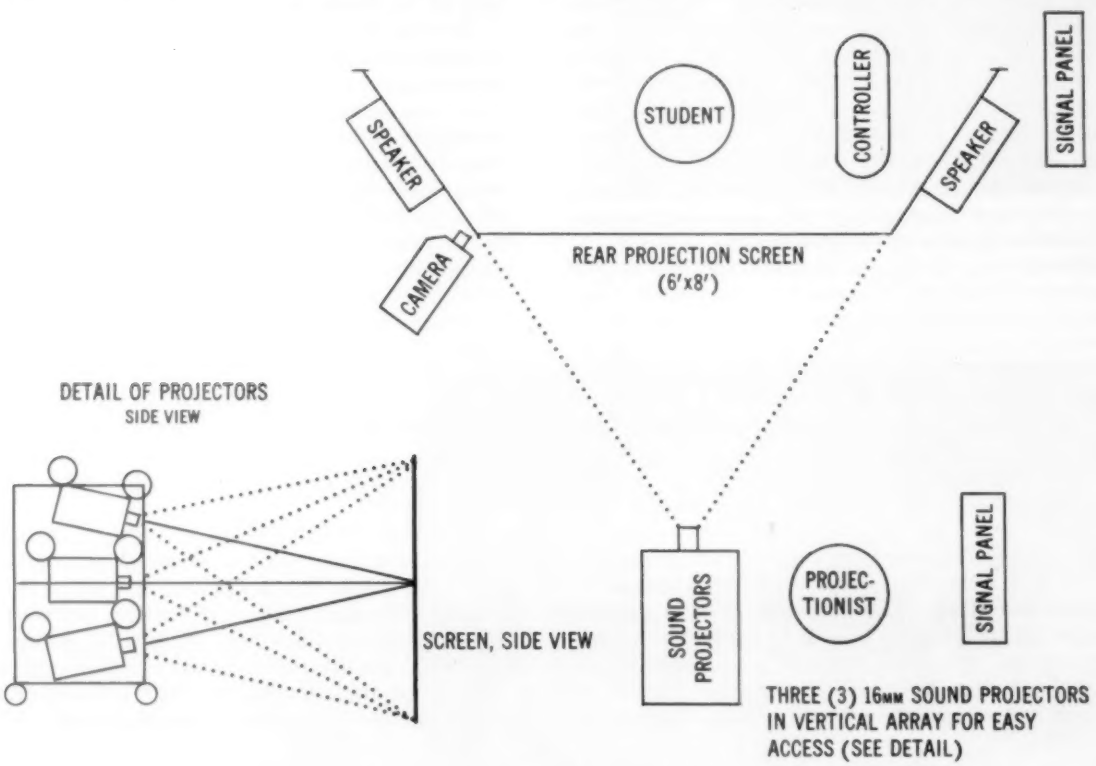


Figure 1: Plan View of the Simulator.

One configuration of the Classroom Simulator, viewed from front. Student teacher is seated at desk facing large rear-projection screen upon which life-size image is projected. Supervising teacher stands at console preparing to change image by pushing appropriate buttons. Motion picture and slide projectors are located behind the screen together with other components of electronic data processing system. A technician may also be located behind scenes to help operate equipment.

projection screen and is observed by the supervising teacher through viewing ports in the smaller wing panels. The large screen allows a life-size visual image to be projected. Appropriate stage props are used to further enhance the illusion of reality which is considered desirable at this point. However, one of the variables under consideration in the preliminary research effort is the size of the projection. It may be learned that a small image is as effective as a large one.

The situations are presented by three 16 mm projectors controlled remotely from the supervisor's position behind the wing panel. The supervisor in control starts and stops the projectors and selects from among pre-filmed sequences as required.

Although the ultimate refinement and use of the Classroom Simulator is unknown at the present time, plans call for experimental incorporation of the device in both pre- and inservice programs of teacher education by utilizing existing equipment and locally produced materials. In addition, many existing educational films used by teacher education institutions have suitable "problem sequences" to which a novice may react. A rear-projection screen may be purchased for a modest cost, and drapes hung to provide the necessary light control.

The essential aspects of the simulation techniques are (1) that a suitable (filmed) stimulus situation be presented to the learner, (2) that the physical practice situation be sufficiently "realistic" to give the learner the experience with some degree of psychological fidelity, and (3) that the student teacher be required to "act out" the response under supervision just as he would in a role-playing situation. The feedback characteristics of the prototype apparatus add continuity and serve to confirm immediately the adequacy of the student-teacher's behavior. Various schedules and formats of the feedback sequences are being explored.

The Classroom Simulator is only one of a number of projects being piloted at TEACHING RESEARCH. Under the present organizational framework of the center, the simulation project comes under the heading of research on transfer. Other categories include research on motivation, instruction, measurement and methodology. The present staff has initiated a number of proposals for major research projects in the areas outlined above. In addition to initiating and carrying out fundamental research on teaching, the new agency of the State Board of Higher Education is developing a Teaching Research Laboratory which will be used as a testing and service facility for individuals and groups throughout the region. The laboratory is being developed as a part of the Laboratory School of Oregon College of Education and will be equipped initially with the necessary apparatus to conduct research in educational television, self-instructional devices, simulation, and classroom communication.

The Center for Research on Teaching was authorized by the Oregon State Board of Higher Education on September 20, 1960. The new agency was located on the campus of Oregon College of Education at Monmouth, Oregon, under the direction of Jack V. Edling. The present staff consists of five full-time persons and one on quarter time, not including Mr. Edling who is on leave of absence during the 1961-62 academic year. ##

SUMMER EXHIBITS AT WESTERN MICHIGAN

The "do it yourself" idea exploited

The material for this picture story was contributed by Carl B. Snow, director of the audiovisual center at Western Michigan University.

ALTHOUGH NO LONGER ENROLLED, former summer-session students come back to Western Michigan University year after year to see the Educational Projects Exhibit. For two days the University lines one of its gymnasiums with displays of magnetic boards, charts, posters, transparencies, and other teaching materials made by summer students.

In 1961, twenty-five hundred visitors (many of them teachers in southwestern Michigan attracted by word-of-mouth reports) went through the 500-display exhibit which started out five years ago with 10 tables.

Future plans call for some "live" exhibits involving a few children, some how-to-do-it demonstrations, and a larger exhibit space coupled with more time for browsing.

Instructors in methods and audiovisual courses at the University summer session encourage their students to make these aids with a view to their own teaching needs.

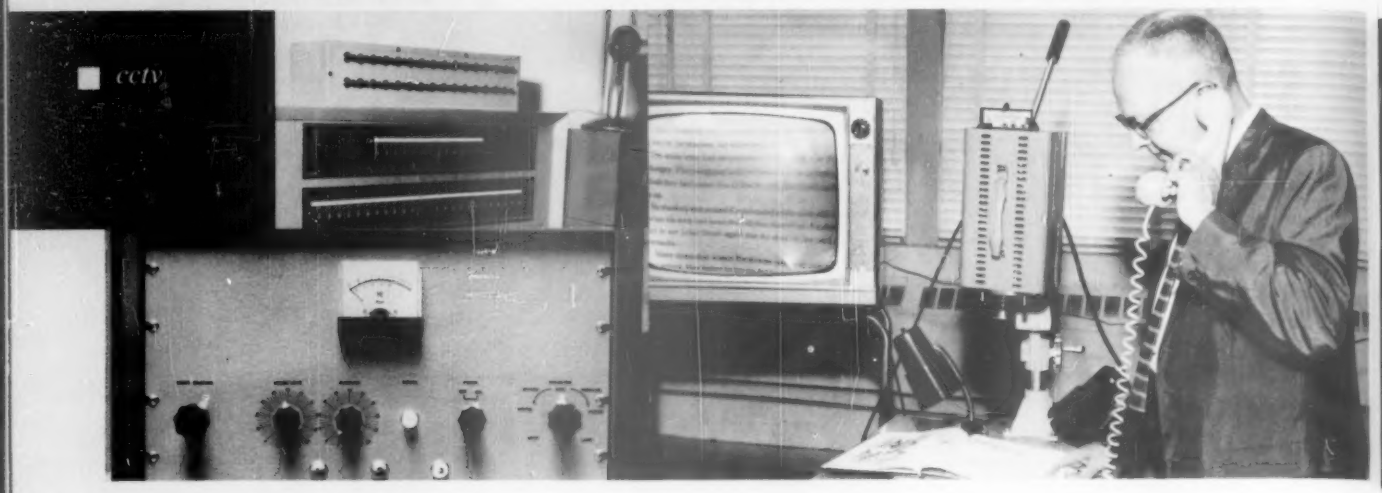
Initial planning for the Exhibit takes place during the first week of the summer session when a committee representing the students meets with an instructor from the audiovisual center. There is no judging, no awards. Each producer is recognized by a card listing his name, school, address, name of the project, and explanatory blurb. The two photos on this page are examples of the variety of displays in this growing exhibit.

Each summer Western Michigan University lines one of its gymnasiums with exhibits made by summer session students.

No official judges, no awards, but many interested teachers.

Below: School intercom unit with special TV studio-classroom telephone switcher mounted on top; bottom, panel of remote control unit.

Garfield Shafer, Churchland principal, answers student's question as he teaches. In background are monitor and special camera used in televising visuals.



THE SCHOOL TV STUDIO AS AN AUDIOVISUAL TOOL

Mr. Duvall is director of teaching materials for the Norfolk County Public Schools.

IF A SCHOOL PLANT is to be equipped with classroom monitors, distribution system, and antenna for reception of open circuit ETV, is it worth-while to spend a little more money and make it possible to originate closed circuit telecasts from within the building? This question was long debated by officials of Norfolk County (Virginia) Public Schools. Last year they sought the answer.

The Great Bridge Elementary School, under construction during the summer of 1960, was chosen for the installation. The teaching materials department drew up rough specifications and presented them to a local electronics firm. Completed last January, the installation included a rooftop antenna, distribution system, twenty-seven 24-inch monitors, and studio equipment composed of two Sylvania vidicon cameras, a film chain, and special lighting for the converted classroom.

During the months that followed, the equipment was used in many different ways. A science teacher from a nearby junior high school volunteered to present enrichment programs. The school's music consultant, who normally made a weekly visit to each classroom, successfully taught an entire grade level at a time. A classroom teacher presented a series of primary arithmetic lessons. Other faculty members presented "spot" programs; many began to discuss the possibilities of team teaching.

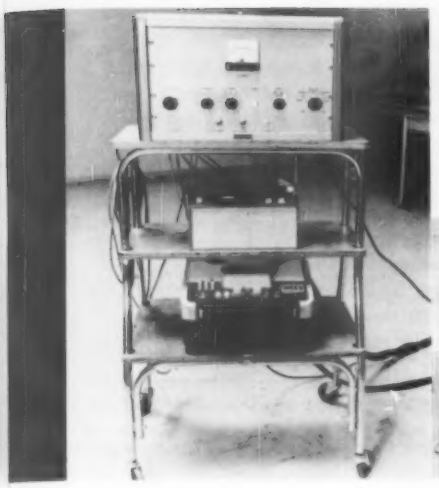
The principal was able to sit down in front of a camera and talk with the faculty and student body. In many instances, a camera was moved to the auditorium (using an extension cable) for televising programs. This practice proved especially valuable when weather was inclement, since the plant is of the "campus" type. Then too, its auditorium accommodates only one-half of the student body.

All concerned with the experiment soon realized that the equipment was a valuable addition to the school's audiovisual program. There were, however, two disadvantages noted by everyone: the lack of direct communication between the TV teacher and her viewers, and the fact that an adult cameraman was needed whenever the studio was in use.

Consequently, the firm which had made the original installation was approached with a request to redesign the studio, making it possible for the TV teacher to operate most equipment by remote control and to have telephone communication with any or all classrooms. Specifications were drawn up and subsequently used in modernizing the Great Bridge facility and in constructing a facsimile at Churchland Elementary School.

Today, in each of the two classroom-studios, the area immediately in front of the chalkboard is designated as the "set," and set lighting is suspended in two banks from the ceiling. Two wooden tables (72″ x 30″) are placed end to end and parallel to the chalkboard, four feet away from it. One table is secured to the floor and equipped with multiple electrical outlets. A custom-built stand, mounted on this table, holds a camera that can be aimed in any direction. Under this is a rack for visuals, along with adjustable lights.

Two more tables, identical to those used on the set, are arranged in a "T" formation, with the base against the wall in the rear of the room. A rearview 16mm TV projector is mounted at each end of the table form-



Left, remote control unit, phonograph, and tape recorder on portable cart. Right, Mr. Shafer focuses dolly-mounted camera for Alan Mandel, science supervisor. Below is the film chain—one projector can be remotely controlled by the TV teacher, the other is provided as a spare. To televise from spare, dolly-mounted camera can be used to send out two films simultaneously on two different channels.

W. CLYDE DUVALL

Herein lies a real potential for expanded film usage

ing the top of the "T," while a camera is swivel-mounted in the center of the other table. This camera can be panned to photograph either projector screen, or it can be aimed between them to televise the set. A third camera, mounted on a dolly, is normally located near the center of the room. An assortment of lenses is provided for all cameras.

The remote-control unit, mounted on a cart, can be operated from any position in the room. A tape recorder and a phonograph—both connected to the audio system—are mounted on shelves under the unit. On the remote-control panel are the On-Off switch, a three-position camera switcher with indicator lights, separate gain controls for microphone and line (projector, phonograph, and recorder), a VU meter, and duplicate controls for one of the two projectors.

A telephone, usually placed on one of the set tables, is connected to an auxiliary unit which has been added to the school's intercom system. This may be connected to one or a group of classrooms without interrupting communication between the office and other rooms. An electric timer, similar to those used on kitchen ranges, is also provided. When set by the TV teacher, this turns on a red light at any desired time, thereby warning her of expiration of program time.

Work on the two studios was completed early in June, and the faculty members of the two schools immediately put the equipment to a test as they participated in workshop courses in TV teaching. The average participant was at first rather dubious about her ability to become a teacher-cameraman-engineer. But every one mastered the technique. Consequently, every one of the workshop graduates is capable of planning equipment use as she plans a TV lesson; and she can do this planning at home. She can go into the studio just prior to program time, arrange the set, adjust lighting, select the desired lens and position and focus each camera, thread the film to be shown, set up tapes and records to be used, and make all necessary tests. Although it is possible for her to watch the studio monitor while testing, classroom monitors do not receive her channel until she switches herself *On the Air*.

This is the story of Norfolk County's experiment. What has been learned can be summed up this way:

- Since few elementary school staff members have any "free time," it is impractical to provide them with a studio unless equipment can be operated by the TV teacher.
- The average classroom teacher can master the operation of such equipment, and many *prefer* to be alone while being televised.
- While such an installation can be a valuable asset to an elementary school, it could be put to even better use in a senior high school—*if all school-owned films could be shown via this particular medium without written clearance or payment of royalty fees.* In many areas, school film bookings have decreased as the use of ETV—both open and closed circuit—has increased. Once the producers offer such blanket clearance, this type of closed circuit TV should become very attractive to high school officials. The red tape and extra work that the teachers now associate with film showings will be gone, as will be much of the film, projector, and screen damage. Trained student operators will project films from the studio; teachers will simply turn on monitors at predetermined times. The use of films should increase tremendously, as would their sale by the producers. The high school staff would have studio teaching, film showings, and open circuit reception—all in one neat package. ##

HOW GOOD IS TV FOR TEACHING SCIENCE?

Some conclusions based on research findings and the author's experience

DON NASCA

THE CLOSED CIRCUIT TELEVISION INSTALLATION at the Brockport College of Education became functional in the fall of 1956. This entire operational facility was installed by the New York State Department of Education to determine the effectiveness of television in education. On April 1, 1959, it was transferred to the State University of Education at Brockport.

Our first work with junior high-school science via CCTV began in our campus school the fall of 1957 and is still in progress. All lessons originate in a studio and are carried simultaneously to four classrooms—two seventh grades and two eighth grades. Each lesson lasts for 35 minutes; initially the students received five lessons per week, now they receive four. All receiving rooms are equipped with talkback, a system of two-way communication that is used frequently during presentations.

During the first two years we carried the science program for 100 days of the school year. Our major purpose was to determine the effect of condensing content normally presented in 140 days by means of total teaching via CCTV. During this experimental period, room teachers did not follow up CCTV lessons or offer individual help.

Mean growth of the groups as a result of receiving science via CCTV is shown in Table I.

A TV opinionnaire was administered to all seventh and eighth graders after 50 days of instruction and again at the end of 100 days. The results of this opinionnaire are shown in Table II.

This information and all test scores were forwarded to the New York State Department of Education in the 1958 annual report of CCTV activities at Brockport. We felt safe in concluding at this point that junior high-school students—as measured by standardized tests—gain significantly in ability to recall science information presented via CCTV. Secondly, student attitude toward CCTV is apparently favorable.

A recent follow-up study of our students as they progress through high school indicates that CCTV provides little significant difference in future science achievement as compared with students in regular junior high-school classes. Our students leave the campus school at the end of the eighth grade and are mixed at random with public school children in the ninth grade. At the time of our initial experiments, children in public school and in our CCTV classes spent similar amounts of time in science classes. Mean final ninth-grade science scores are shown in Table III for students with CCTV background and those without.

Using other available information we attempted to

Don Nasca is science supervisor at State University Teacher's College, Brockport, New York.

Table I: GROWTH RESULTING FROM 100 DAYS INSTRUCTION VIA CCTV

TEST	SEPT. 1957	MARCH 1958	MEAN GROWTH
New York State Science Survey Test	Form A	Form B	.9 Years
Stanford Achievement Test (Science Section) Advanced Battery	Form J	Form K	1.1 Years

Table II: STUDENT ATTITUDE CONCERNING CCTV

50 DAYS	100 DAYS	
67%	73%	of the students felt that CCTV instruction helped them remember science material as well or better than normal instruction.
77%	80%	felt that CCTV instruction maintained or increased their interest in science.
81%	83%	felt they could observe small items and demonstrations better than in ordinary circumstances.
74%	75%	felt that discussion remained the same or was somewhat decreased as a result of CCTV.
81%	83%	felt that distractions were decreased and they could concentrate more effectively on CCTV.
62%	69%	felt they would receive the same or higher grades than normal in science as a result of CCTV.
64%	70%	recommended that CCTV be used at least half the time for a course of this nature.

TABLE III: NINTH-GRADE SCIENCE SCORES

	Number of Students	Mean I.Q.	Mean 9th Grade Final Science Score
CCTV Background			
1959	32	111.4	84.4
1960	32	.....	80.8
Public School Background			
1959	106	109.4	80.8
1960	115	.....	76.8

Table IV: CORRELATION OF IQ AND ACHIEVEMENT

	No. of Students	Type of Test	IQ Sept. Score	IQ Growth During 1 Year Period
1957-58				
7th Grade	40	N.Y.S. Science Survey Test	.523	.042
8th Grade	34	N.Y.S. Science Survey Test	.427	.035
	34	Stanford Ach. Advanced Battery Science Section	.543	—.082
1958-59				
7th Grade	37	N.Y.S. Science Survey Test	.529	.106
8th Grade	36	N.Y.S. Science Survey Test	.667	—.044
	36	Stanford Ach. Advanced Battery Science Section	.483	.007

determine the relationship of student ability to achievement resulting from CCTV instruction. An analysis of Table IV indicates a high relationship betwen IQ and achievement in science before exposure to CCTV. However there is no relationship between IQ and achievement as a result of studying science via CCTV. It may also be noted that the consistent results obtained in both relationships may be indicative of the accuracy of our measuring device.

IQ scores are individual Stanford Binet, administered at the primary level. Raw growth scores were obtained from the variance between different forms of the N.Y.S. Science Survey test and Stanford Achievement test administered at the beginning and end of each annual series.

Our CCTV instruction is apparently geared to the middle segment. More capable students are hindered while less capable students show significant gains. To help counteract this effect we have decreased CCTV from five to four 35-minute periods per week and use the fifth day for lab. (Each group meets for a 45-minute lab period with the CCTV instructor.)

Emphasis is placed on actual experimentation or problem solving developing out of the CCTV lessons. We have also provided opportunities for interested students to participate in science club activities. Room teachers are now encouraged to follow up CCTV lessons and to provide individual aid when necessary. Through this increased emphasis on active participation and individual attention we hope to achieve satisfactory instruction for all of the students.

It is the author's firm belief—based on the objective evidence presented here and on subjective conclusions reached during four years' experience as a CCTV instructor—that television may be effectively utilized for science instruction in junior high school. Our opponents will immediately voice three objections, to wit:

"It is impossible to remove the live teacher from the classroom and still achieve satisfactory results."

"The teacher's morale will disintegrate if he feels he can be replaced by a television receiver."

"Television limits instruction."

The personality of an individual, the reason for looking at a "live teacher," can effectively be projected via television. We will grant, however, that the full potential of television can be utilized only if the room teacher coordinates his efforts with the TV lesson and provides follow-up activity. We will also concede that there is little opportunity for anything but limited discussion and that even this opportunity decreases in direct proportion to the number of students. Proper follow-up, however, can provide opportunities for some discussion. Assuming that limited discussion is a distinct drawback, there are several factors that easily outweigh this single disadvantage. They are:

- A science specialist may be used to present basic content to a large number of students.
- Each student is provided a front-row seat and even the smallest picture, specimen, or experiment is viewed under optimum conditions.
- Because all extraneous objects and noises are eliminated, the student's attention can more successfully be directed toward pertinent points of the presentation.
- Dramatic appeal may be utilized to increase interest in "dull" areas.
- Superimposing—two pictures received at the same time—provides an ideal opportunity for association of words and ideas with concrete objects.

REVIEW WITH THE VISUAL, TOO

PERIODIC REVIEWING has always been a principle of oral instruction. Unfortunately, visual aids in such instruction have not accompanied these reviews. Oral re-emphasis has been deemed sufficient. It has been assumed that, once seen, the original image is always recalled.

Not so.

Experimental psychologists have found that the retinal image (that which is originally registered on the retina) is seldom the image retained by the memory. Correlate images (the result of various experiences closely or dimly related to the image being viewed) have altered the memory's reproduction of the retinal image.

"We see what we want to see," it seems. Not what we should recall. What we finally remember is line, form, texture, and occasionally an approximation of the original color: the details escape us.

It is obvious, then, that we need to include the "visual" (if it has been used in our teaching) *at the same time* as the related oral review occurs.

How can we assure this being done?

- By repeating that part of the presentation involving the original image.
- By photographic duplication, a supplement given the students at the time of the original oral presentation.
- By printed duplication, to be used as inserts for the students' notebooks, at the time of the review.
- By requiring the students to "re-see" the original object from which the presentation developed, at their own time and convenience.

What happens if we include the "visual" in our oral review of teaching?

- The forgetting process (extinction) is delayed.
- The recall of the mental image is easier and more distinct.
- The thought processes, derived from the preceived image, are less likely to be confused, and confusing, when students associate their reasoning with the instruction.—*Contributed by Arthur Morris Wood, Specialist, Audiovisual Aids, Instructional Methods Branch, United States Army Engineer School, Fort Belvoir, Virginia.*

■ *new use of equipment*

White lines above indicate tape recording circuits. Cable running down each row of seats connects each desk with headset and voice control box.

Closed Circuits for Tape Recordings

HERMAN C. HENDERSON

Here is how the author solved the old problem of overcrowding. His willingness to spend $3000 in personal funds to carry out the project is an example of one teacher's devotion to good instructional practices. Mr. Henderson is a sixth-grade teacher in the Gregory Elementary School in Houston.

THE CONCEPTS upon which I base my use of tape recording circuits had their beginnings early in my teaching career. After I had observed a five-grade range of achievement in my sixth-grade class, had surveyed the course of study, and had seen the same pattern of disparity in other curriculum areas, I said to myself—"This will never do"—and began a search for materials and techniques.

After limited research and experimentation, I became convinced that audiovisual technology would make the greatest contribution to the solutions of these problems of multi-level achievement.

[By the term "multi-level" I refer to the fact that a sixth-grade teacher, for example, can have some pupils with the reading ability of a second-grader and others with the ability of a seventh-grader—in other words, under-achievers as well as the academically talented.]

The tape recording circuits which are the key to my instruction plan can also be called "closed circuits." As shown in the photo on the left, a cable runs down each row of seats and connects at each desk with a headset and a voice control box. The cables are parallel circuits (they are also "closed circuits" since only pupils listening on a common circuit can hear what comes over the wire). At the same time, with the proper switch control, one, two, or all five rows can listen at the same time. Lessons prepared on tape ahead of time can be fed back on one, two, or more circuits, enabling the teacher to handle pupils of several ability levels simultaneously.

How I Put the Circuits to Use

Some of the uses to which I have put these recording circuits are: (1) reviewing words in a basal reader; (2) multiple spelling groups; (3) phonetic drills; (4) music appreciation; (5) literary appreciation; (6) listening to completed oral reading drills; (7) drills in combinations; (8) commentary for filmstrips; (9) directed reading for specific purposes; (10) speech therapy; (11) drills in basic language skills; (12) checking directed or undirected drills in basic subjects; (13) checking or introducing specific assignments in arithmetic; (14) listening skills of many varieties; and (15) tests in specific areas.

I set up my first small unit in 1956, encouraged by Harold Wigren, formerly AV director of the Houston Public Schools and now NEA consultant on educational television. At that time I had only 20 headsets and voice control boxes. Since then the project has grown to over 40 such units, three tape recorders, and a host of instructional materials.

The components of a "closed circuit" recording arrangement such as I describe are relatively inexpensive. My first transmission lines consisted of television antenna cable, but I later changed to P.O.T. No. 18-2 Cable which gives excellent reception. The cables can be covered by strips of inner tube which children bring from home. Strips cut from discarded garden hose serve to lead the cable ends to the voice control boxes. Before seizing on this device, the lead wires were at the mercy of careless feet which easily caused disconnections and consequent delays. No. 12 upholsterers tacks will hold the rubber strips in place and the hose sections can be secured to the sides of the desks by pieces of wire.

My first outlay cost $5 per pupil station, not including tapes, tape recorders, or jack boxes. Purchase on a large scale (as for an entire school system) would undoubtedly lower the unit price.

My earliest experiments with these "closed circuits" were in spelling where I organized five groups, each with a leader. My next experiments in reading paralleled in many ways those outlined by William Kottmeyer in the chapter on classroom organization in the 1947 edition of his *Handbook for Remedial Reading*. There were also similarities with the section on classroom provision in Donald Durell's *Improvement of Basic Reading Abilities*. I expanded my activities to include other elementary subjects, always with continued growth on the part of students and smooth transition from one achievement level to another. ##

THE DICTATION MACHINE

A Replacement for the Lay Reader

ROBERT LUMSDEN

The author is on the staff at Evanston Township High School, Evanston, Illinois.

ONE MORE ELECTRONIC DEVICE—the dictation machine—has now come to the assistance of the teacher. It has just been proved a startling aid by three English teachers in Evanston Township High School who used it experimentally to grade papers. For over a month the Evanston teachers, instead of writing their criticisms, spoke them into a Voicewriter. The results proved that there is a dramatically simple answer to the problem of the English teacher's paper load. Each of the participants halved the time spent on grading papers.

The English teacher normally doesn't consume much time reading a paper. He can read the average two-page composition in three minutes, marking it with such symbols as SP, AGR, and P. It is in writing his evaluative criticism at the end of the composition that the conscientious teacher spends his time. If he does it carefully, it takes him five or six minutes.

At this point the dictation machine becomes a useful tool. After very little practice the teacher can speak his criticism into a dictation machine in a fraction of the time it takes him to write it.

The way in which the machine is used is simplicity itself. The teacher takes home a set of student papers as usual—and a portable Voicewriter. He reads the paper as usual, marking it with corrective symbols. Then he picks up the microphone and speaks his criticism as though the student were sitting before him. The next morning he gives his papers and dictation disc to a stenographer who inserts a long roll of paper into her typewriter and begins to type off the criticisms. Having finished, she takes a pair of shears, snips them off, and staples them to the student papers which have been kept in the order in which they were corrected the night before. The papers are thereupon returned to the students.

Buying each teacher a dictation machine and giving him stenographic help may be costly, but many high schools give their English teachers costly lay reader help. These schools could save money by substituting stenographic time for lay reader time. Further, a teacher with, let us say, 75 hours of stenographic assistance can read all his own papers and still save himself more time than he can save by employing 100 hours of a lay reader's time.

The three Evanston teachers who participated in the experiment worked under carefully controlled conditions. They each graded over 100 papers in the traditional manner and the same number with a dictation machine. The data collated at the end of the experiment showed that, with the latter, they exactly doubled their output. Let us examine the results in the case of just one teacher who graded 116 papers in 1728 minutes in the usual manner and in 705 minutes with a dictation machine. In other words, he saved 1023 minutes.

Had this teacher used lay reader help, he would have read his 116 papers in 1728 minutes. His lay reader would also have read them in about 1728 minutes. That means he would have used a bit over 28 hours of lay reader time in helping him double his output. He and his lay reader together would have done 232 papers between them. They would, together, have expended a little over 56 hours of work. Keep in mind that the lay reader must be paid, let us say, $2 per hour for her 28 hours of work. A stenographer could also be employed for $2 per hour. But less than 11 hours of her time would be needed, for the experiment showed that she averaged one criticism every two-and-a-half minutes. Even if it took her three minutes per paper she could do the whole job in 11½ hours.

From the foregoing it is apparent that the use of the dictation machine saves time—and will save money for any school which is already employing lay readers. But perhaps what pleases English teachers most is that they are able to grade all papers personally. Neither teachers nor students like to have an "outsider" involved in a composition course. It might be added that students seem to prefer to receive neatly typed criticisms stapled to their work rather than the usual hurried scrawl to which most English teachers must resort.

■ *new use of equipment*

AV FOR INDEPENDENT STUDY

L. D. MILLER

Mr. Miller is assistant director of the audiovisual center at Purdue University.

DURING THE 1960-61 SCHOOL YEAR, 27,400 students at Purdue University made use of the Audiovisual Center's facilities for independent study. This was an increase of more than 20,000 students over 1958-59 when a little less than 7000 persons used these same facilities. Student demands have made it advisable to keep the Center open 90 hours per week and pressure is strong to have this increased still more.

Current plans are to install a network of audio lines by which eventually the majority of the classrooms on campus can, at the wish of the professor, be connected to tape centers in the individual buildings or to the consoles in the AV Center. This will permit the Center to record lectures at the instructor's request and make them available for student use. The number of these requests are encouraging even now, but the possibilities for the future are almost unlimited.

Students began viewing films independently at Purdue as early as 1950, and in 1955 all students on campus were invited to use the Center's library of films and filmstrips. The following year tapes were made available. In spite of poor equipment and drab surroundings, sufficient numbers came to demonstrate the value of the program. When the center moved into larger quarters in 1958, the volume of independent study began to climb sharply upward.

An analysis covering the 12 months ending in June 1961 showed that 19 percent of student activity at the Center was devoted to viewing films and 76 percent to listening to tapes. This preponderance of tape listening reflects the fact that students in the modern language department are familiar with tapes and tape recorders and that the language instructors encourage their students to spend extra time in the AV Center. Another factor has been the development of special taped materials for some courses in English and General Studies.

The rapid increase in the number of tapes, with consequently greater potential for listeners, has been made possible through the activities of students and staff. For instance, a Freshman physics section recorded their class sessions and deposited the tape lectures in the Center. They considered this profitable since the professor was of foreign extraction and somewhat difficult to understand. The opportunity to re-run portions of the tapes solved the problem.

Another series of tapes receiving heavy usage were the ones developed by an instructor in the English department for his course in folk lore. After playing selections in class to illustrate points or to give an overview, he directed the students to the AV Center's tapes for specifics. This worked so well that the same pattern was followed in a course of music appreciation.

Procedures in the AV library are kept as simple as possible. They are the same for staff as for students, except that the student is required to present his identification card (referred to as "passport"). Presentation of this card bearing the student's name and picture entitles him to use any film, filmstrip, or recording in the Center but does not permit him to carry it from the premises. Taking materials home would undoubtedly be advantageous to the student but would necessitate an investment in materials prohibitive at the present time.

The student can, however, bring his own recorder to the center and copy all of the non-copyrighted material he desires. The Center also will make copies for him for a small charge. Many of these taped copies are stockpiled in residence halls where they reportedly get

Preponderance of tape listening reflects (a) heavy usage by Foreign Language students and (b) development of taped materials for English and other studies.

Student demand at Purdue keeps AV Center open 90 hours per week.

considerable use, especially before examination. Others are used by students who find it inconvenient to spend time at the Center.

The method by which a student secures and uses materials (in this case a film) are as follows: (1) He makes his selection from the card file and, (2) on a special keysort card places the name of the film and its call number. (3) This and his ID card are given to the staff member on duty who, (4) secures the film and stamps the card in a special machine. (5) The ID card is returned to the student along with the film, take-up reel and a key to a viewing room. (6) The student operates his own equipment and (7) when he is finished he returns the film, reel, and key to the counter.

Since the Center inspects films after each showing, maintains careful supervision, and keeps projectors in good condition, film damage has been surprisingly small. Records indicate that there has been much less damage from threading errors during individual viewing than from comparable use by off-campus borrowers. To reduce operating mistakes still further the Center is planning to install mechanical instructional devices in each viewing room. These are expected to carry the load of introducing and training persons in the operation of the equipment. One room equipped for a time with a conventional slide projector and auxiliary equipment demonstrated that no other help is necessary in learning to operate a 16mm sound projector. As soon as a compact, less expensive device can be purchased or made locally, it will be put to use, thus reducing the sometimes exasperating demands upon the Center staff.

As previously noted, individual requests are made on a special card. Information such as the type of material, its shelf number, room to which the person is assigned, date, and hour are punched into this card. The cards are sorted regularly providing data for persons or departments concerned. This information also helps in planning for growth of the program.

The increase in demands for individual use of AV materials has raised many questions about the students who participate. Are they the slow, average, or brilliant ones. How many are saved from failing courses through the extra work at the Center. Is there any correlation between long hours with tape and film and success in school? A study has been planned by which a start may be made toward answering some of these questions. Presently it appears that results justify the expenditure of time and money. ##

Records show surprisingly little damage to equipment during individual viewing.

Ambassadors Without Portfolio

CLIFTON B. DEVOE

The author is a retired army officer who began his audiovisual career as a graduate assistant. He is now assistant to Director Sam Harby at the University of Miami audiovisual center.

AS PROFESSIONALS we have rather casually accepted the numerous improvements in audiovisual equipment and techniques which have made classroom presentations more stimulating and interesting. I wonder if we haven't also casually accepted some of the people who do so much to make audiovisual presentations possible. I refer to the great number of students who work as part-time projectionists, technicians and artists in the various audiovisual centers of the country. These young men are usually earnest and competent students who wish to add to their incomes and also to their work experience.

The college audiovisual director, who is really an educator in the true sense of the word, has a wonderful opportunity to work with young men in the formative years. There is ample opportunity for guidance counseling, training in the use of equipment, development of artistic and mechanical abilities and most important, the development of leadership with its responsibilities and rewards.

We, at the University of Miami, feel that our use of students in the audiovisual department has been highly successful. The numerous comments received from classroom instructors and administrators indicate that, on the whole, the system has worked very well.

Like most college and university AV departments, ours has the primary mission of providing materials for classroom presentation. To accomplish this mission there is a full-time staff consisting of a director, an assistant director and a secretary. Assisting the fulltime staff is a group of 20 student assistants who are fully qualified to handle any phase of audiovisual presentation. This has been made possible through careful selection of personnel, thorough training, and frequent observation of efforts.

We have been helped in the selection of student assistants through the cooperation of the University of Miami Placement Service. They have carefully screened prospective part-time employees before referring them to us for interview. The qualities which we have requested are intelligence, courtesy, neatness, and a genuine desire to work and learn. We are not concerned with whether or not the applicant has had previous experience in audiovisual work—although this is certainly important—if the other qualities desired are present.

We have no difficulty in obtaining applicants for part-time positions and each applicant is interviewed carefully and completely. A simple code of conduct for student assistants is explained to the applicant during the interview and he is asked whether or not he feels that the requirements are reasonable and pertinent. We have an opportunity to observe the demeanor and dress of the student as well as his attitude toward school and work activities. We tell him that an audiovisual student assistant is actually an assistant classroom instructor during an audiovisual presentation and that his entire deportment must be professional both in technical competence and in attitude toward the instructor and class.

If the applicant seems to have the qualities we desire he is entered on the employment rolls and requested to report for training. He fills in a form indicating free time. This form is fastened permanently to a clipboard which hangs on the student assignment board, thereby enabling the supervisor to assign duties in keeping with the student's class schedule.

At this point it may be pertinent to say that the aforementioned supervisor is also a student who has progressed from operator to supervisor through length of service and ability. Here we have an example of leadership potential which has been nurtured carefully over a period of time.

We like to instill the idea in the minds of our student assistants that the best principles of responsibility and progress are developed during the college years and that, as Napoleon once said, "Every private in the Grand Army carries a marshal's baton in his knapsack." Lest the reader gain the impression that we are all-knowing or overly smug, let me hasten to add that we have our failures as well as our successes. On occasion it has been necessary, after repeated counseling, to inform a student assistant that he does not measure up to the standards which we have set. This is always an unpleasant task but one which must be carried out in the best interest of the department and the university.

We do our best to maintain *esprit de corps*. In our frequent staff meetings, each student has an opportunity to make suggestions for better working relations and efficient operation. Student assistants are encouraged to seek our help with educational or personal problems. A room is provided where they may study or socialize during their leisure time, and in general everything possible is done to keep them interested and happy.

A brief word about the work being performed by these student assistants may help the reader to understand the situation as it exists at the University of Miami and how it might apply to other similar institutions. At present three television courses of study are offered. The closed circuit to ten classrooms is operated entirely by student assistants except for the services of a local firm which maintains the equipment and makes repairs. We feel that this is an outstanding accomplishment by the student assistants and one in which they can take pride. One of the most sought-after jobs is that of television assistant and we encourage this interest by letting them all have an opportunity to learn this phase of the work.

Other service to the university includes the presentation of motion pictures, slides, filmstrips, tape and disk recordings, overhead and opaque projection, public address supervision and maintenance, production of transparencies and other material, and assistance at audiovisual education classes conducted by the department. In addition our operators are often requested by church groups and other community organizations for community presentations of audiovisual materials.

Statistics for the 1960 fall semester indicate that student assistants worked over 2000 hours on University of Miami projects. With 20 students involved, this is an average of 100 hours per semester of four months. No student assistant fell behind in his studies as a result of part-time work in the audiovisual department; in fact, our employee's grades seem to have been above the average. In view of the fact that the audiovisual department employs more students than any other department we feel justifiably proud of this record.

A Two-Way Street

As we review the past we recall that most of our student assistants who have graduated are finding success in their chosen fields. In conclusion, it is no understatement that the success of our audiovisual department has been and will continue to depend on the splendid job done by our student assistants. Without them all the equipment and new techniques in the world would have been useless, for they are the people who must be depended upon to use the equipment and employ the techniques.

It is our wish that this article may stimulate other professionals in the audiovisual field to share their experiences to the end that we may all benefit therefrom. We are in a field of education which has great potential and which needs all the research and technical know-how that we can muster. No one person has all the answers, of that we can be sure, but through constant interchange of ideas and experiences, progress will be continuous and constructive. ##

ndea

CALIFORNIA BLUEPRINT FOR APPRAISAL OF TITLE III

DONALD W. JOHNSON

"THE NATIONAL DEFENSE EDUCATION ACT is the greatest stimulus to improvement in education in the United States since the Northwest Ordinance."

"The National Defense Education Act is an unwarranted infringement on the right of the local district to determine its own programs."

These two statements represent the wide diversity of opinion regarding Public Law 864. Like many other statements, however, they are made without reference to the actual effect of the Act upon the quality of learning experiences offered students. They do not take into account NDEA's indirect impact upon non-supported areas of the curriculum, nor upon the teaching staffs of the nation. There is no indication of the wide diversity of plans which the various states have developed for the administration of NDEA.

Recognizing the responsibility of the profession for a careful appraisal of the effects of NDEA, the California State Department of Education has initiated a comprehensive plan for the evaluation of Title III under the leadership of J. Graham Sullivan, chief, Bureau of National Defense Education Act Administration. Wilbur Schramm, director of the Institute of Communication Research at Stanford University, will act as advisor, and the author, as administrator of the program.

Inasmuch as the Act provides that each state shall submit its own plan for the administration of NDEA, some background regarding California's plan is necessary.

The California State Plan was based upon the belief that the most effective use of NDEA funds would necessitate (1) advisory committees in planning and administration, (2) careful appraisal of existing programs, (3) detailed planning regarding the use of proposed equipment and material, and (4) built-in evaluation of proposed program changes. Thus California has no "approved list" of equipment and materials but considers requested equipment on the basis of its appropriateness for specific instructional tasks.

Although the evaluation plans include an analysis of equipment and material purchased under the act, the main purpose will be to test certain hypotheses which formed the basis of the California State Plan for NDEA. These hypotheses are:

1. Title III of NDEA has helped to make it possible for more students to be educated in science, mathematics, and modern foreign languages.
2. Title III has contributed to the improvement of training in science, mathematics, and modern foreign languages.

Mr. Johnson is administrative consultant for the Bureau of National Defense Education Act Administration, California State Department of Education.

3. Title III has accomplished these results by (a) directly facilitating plans that already existed; (b) initiating new thinking and new planning; and (c) exerting indirect influence on related aspects of these subject area programs—such as evaluation procedures.

4. Title III has been a significant factor in many forces that have entered into the pattern of improvement in science, mathematics, and modern foreign language instruction.

5. Title III of NDEA has contributed to this improvement by: (a) providing resources at the state level for program development; (b) helping to create a climate for increased emphasis in science, mathematics, and modern foreign languages; (c) providing expert consultant assistance to districts; (d) assisting county offices to provide more effective coordination services; (e) stimulating more effective evaluation procedures and instruments; and (f) assisting in financing necessary additional equipment and materials.

6. Title III of NDEA has been more effective in local districts when: (a) adequate provision was made for careful evaluation of existing programs; (b) expert consultant services were utilized in the development of proposed improvements; (c) specific plans were developed.

7. Effective leadership by the State Department of Education in administering special purpose apportionments such as Title III results from: (a) using representatives of applicant districts to develop plans and assist in evaluating project proposals; (b) requiring school self-study and planning; (c) encouraging cooperative curriculum revision involving local districts, county offices, and the state department; (d) making available a wide variety of expert consultant service to districts and county offices in the development of project proposals.

8. Title III of NDEA has achieved these positive results without adversely affecting other subject areas. On the contrary, it has contributed indirectly to their improvement.

9. Districts participating under Title III are representative of all districts in the state.

10. The greatest relative improvement resulting from Title III of NDEA has occurred in the smaller and poorer school districts.

In order to test the hypotheses given above, all districts in the state with approved projects will be asked to complete a questionnaire. The questionnaire will ask them to appraise the nature and amount of change taking place in instructional programs affected by NDEA, to identify the ways in which Title III has influenced these changes, and to make specific recommendations regarding desired improvements.

The questionnaires ask districts to respond to questions in 12 general areas. Respondents are to indicate their judgment as to the extent of change or improvement in each area, and to describe in free-response fashion the specifics on which their judgment was based.

The 12 questionnaire categories are: (1) quantity and quality of training in named subject areas; (2) changes in program; (3) changes in organization; (4) changes in instructional facilities; (5) changes in pupil achievement; (6) changes in teacher effectiveness; (7) progress report of research aspects; (8) progress report on incomplete projects; (9) effect of Title III on changes described; (10) local plans for further program improvement; (11) direct and indirect influences of Title III on non-supported subject areas; and (12) recommendations for improvement in NDEA and its administration in California.

In order to provide effective communication with the participating districts, the Bureau of NDEA Administration has used the office of the county school superintendent as its agent in working with local districts. During the third and fourth weeks in September, four training sessions for county personnel were held in the state. The one-day sessions included discussions on the purposes of the evaluation, techniques to be used, and specific responsibilities of the county office.

County officials in turn held meetings with superindents and project directors, informing them about evaluation instruments, giving them examples of adequate and inadequate responses, and answering their questions. Districts will be allowed approximately 45 days to complete their evaluations and respond to the questionnaires. The responses will be coded in accordance with accepted research techniques for open-ended questions, and the answers tabulated with data processing equipment.

Data Summary Will Decide Next Steps

A summary of the data will be reported to the Advisory Committee on Evaluation of Title III, at which time the Committee will recommend next steps. These might include further written communications, interviews in selected school districts identified by the questionnaires, or depth studies within local districts.

Certain descriptive material in the questionnaire will be given to appropriate bureaus in the Department of Education for publication. In this way successful practices in science, mathematics, and modern foreign languages can be shared among the districts in the state.

The evaluation instrument has been structured so that the process of responding will assist local districts to appraise more closely their instructional programs and to identify more clearly the ways in which the Bureau can help them plan improvement.

Congress recognized that the National Defense Education Act itself was an experiment in federal aid to education. Implicit in the time limitation placed upon the Act was recognition that the soundness of special purpose legislation in education had not been proven. There was also the question whether or not federal aid was possible without control. For the first time in history, the U.S. Commissioner of Education called in representatives of the State Superintendents to assist the U.S. Office in interpreting the intent of Congress and drafting regulations and procedures for the administration of the Act.

It is generally recognized that the nature of school financing is undergoing change. It is also believed that participation by the federal government is inevitable. The California study seeks to determine in more detail the effectiveness of one type of legislation, the quality and amount of instructional change it has encouraged, and the specific elements which have contributed the most.

The results of the study should be of assistance in the development of legislative proposals in the future as a guide for the administration of state educational agencies. Education, as any other agency of state government, is concerned with the value of the programs it administers and seeks to determine the most effective use of funds available.

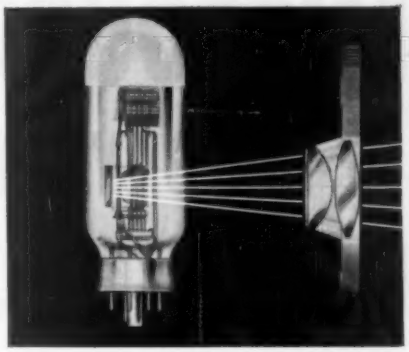
Bell & Howell engineering creates the most revolutionary 16mm sound projector in 25 years... different from top to bottom...inside and out!

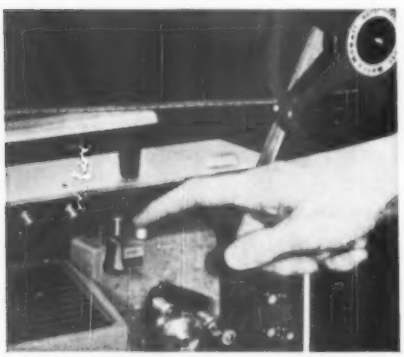
look →

THIS IS THE NEW FILMOSOUND SPECIALIST!

20% LIGHTER than any other major audio visual projector. It weighs only 29 lbs.! It is the first projector with a magnesium die-cast unitized frame – lighter . . . stronger . . . extra tough! The new FILMOSOUND SPECIALIST is not just light enough to lift . . . it's light enough to carry . . . and rugged enough to take the bumps and bangs. This will mean considerably more use in classrooms. Teachers will be more enthusiastic about using films when they don't have to handle a cumbersome piece of equipment.

34% BRIGHTER than the average 16mm projector! The newly designed Proximity Reflector lamp and a new f/1.4 Super Proval Lens give sharper images and more brilliant colors . . . a picture with punch. No need for special shades or blinds in most classrooms. The new FILMOSOUND SPECIALIST is so bright it is even replacing arc-light projectors in many school auditoriums, besides serving double duty in classrooms. And you can interchange 750, 1000 and 1200 watt bulbs and still get more light with each.





FAR, FAR EASIER TO USE with the most simplified controls ever put on a 16mm sound projector. It sets up from closed case to projected picture in a little over a minute. Rewinding is fast and simple, you don't change reels. Internal gears operate the reel arms; no belts to switch . . . or to tear loose. An automatic lower loop restorer keeps the film moving smoothly and quietly without interruptions – even with damaged film. Teachers and students can show films confidently without being professional projectionists.

The rapidly growing importance – and cost – of modern school audio visual programs make it imperative that each appropriated dollar be spent as wisely as possible. In addition to considering the tangible advantages of the FILMOSOUND SPECIALIST, consider one intangible: it is made by Bell & Howell . . . maker of over half of all the 16mm sound projectors now in operation. Bell & Howell quality means dependable durability. Bell & Howell experience means a projector tailored to your exact needs. In short, the FILMOSOUND SPECIALIST will go more places and do a better job under more conditions than any other school projector in the world!

CLIP THIS COUPON AND MAIL TODAY!

BELL & HOWELL COMPANY, Dept. AV-11
7100 McCormick Road, Chicago 45, Illinois

I am interested in the FILMOSOUND SPECIALIST for our school audio-visual program. Please send me more information.

NAME_____

POSITION_____

SCHOOL_____

ADDRESS_____

Bell & Howell *FINER PRODUCTS THROUGH IMAGINATION*

Watch for "Bell & Howell Close-Up!" Informative . . . Provocative. ABC-TV Network, Oct. 31, Nov. 14, 23, 28, Dec. 5, 10 and 13.

MISSOURI WELCOMES YOU

to the DAVI NATIONAL CONVENTION

MARCH 25-30, 1962

HOTEL MUEHLEBACH MUNICIPAL AUDITORIUM

DAVE Organizes for DAVI

Luke Boone
State Chairman

Don Smith
Local Chairman

Minaruth Galey
Wives Entertainment

James Newell
Local Arrangements

Rolland Schlieve
Registration Packets

Forest Crooks
Message Center

Elizabeth Golterman
AV Roundup

Paul Andereck

James A. Hazlett

GREETINGS . . . writes Paul Andereck, president of the Department of Audio Visual Education, Missouri State Teachers Association.

"The teachers, administrators and educational communications specialists of Missouri bid you welcome to the 'show me' state. *Show Me AV* is the title of our state association's newsletter. Let's make it a challenge to the program participants and exhibitors of the 1962 Convention: *Show Me* the latest technological developments for the improvement of instruction. *Show Me* the research that proves the effectiveness of AV instructional techniques. *Show Me* the progress being made all over the United States — and *Show Me* how to solve the audio-visual problems I must face in my job."

WELCOME TO THE HEART OF AMERICA . . . writes James A. Hazlett, Superintendent of Schools, Kansas City, Missouri.

"This is the official welcome from one organization to another. Everyone connected with the Kansas City Schools recognizes the significant contributions made to the education of children and youth through your organization.

"This is a civic welcome from the heart of the city to the 'stranger within our midst' and finally this is an individual welcome from friends to friends, a welcome that springs from a unity of feeling in the association, one with the other, in the great cause of education."

Grace Blankenship
Local Treasurer

Richard Nibeck
Chairman of Services

Dorothy Myers
Hospitality Chairman

Carmel Ballew
Registration Chairman

Bertha Northern
Study Trips

Robert Barr
Transportation

Lucille Welden
Hospitality Room

J. R. Manly
Equipment

Howard Baltz
Projection Operators

Wiley Woodring
Room Coordinators

Bailey Gardner
Speaker's Bureau

V. C. McCluer
Welcoming Committee

VOTE IN DECEMBER

Allen

Parsons

Sherman

Fulton

McBride

Williams

Dilworth

Forsdale

Hall

Hunter

Runner

Seel

Stepp

Wagner

Wyman

For President Elect

ALLEN, William H., director of research, Department of Cinema, University of Southern California since early 1960; special consultant ETV, California State Department of Education since 1959; advisor on communications, System Development and RAND corporations, 1956-60; served on the faculties of the University of Southern California, University of Wisconsin, and San Diego State College, 1950-56; early career as classroom teacher and county audiovisual director in San Bernardino County (Calif.) schools; served in the U. S. Army during war years. A.B. and Ed.D. University of California; M.A. Claremont Graduate School. Vice President of DAVI 1961-62; presently DAVI Commissioner of Research Directions; editor of AVCR sinces its inception; first chairman, DAVI Research Committee; research consultant for U. S. Office of Education on Title VII program and currently conducting research on "A Study of the Non-Linearity Variable in Filmic Presentation." Editor, first five-year report of Lake Okoboji Leadership Conferences, 1960, co-editor, *Audiovisual Administration* (William C. Brown Co. 1951). Author *Television in California Schools* 1960, chapter on "Audiovisual Communication" in 1960 edition of *Encyclopedia of Educational Research,* over 50 professional articles on education. Member NEA, American Psychological Association, American Educational Research Association, Audio-Visual Education Association of California.

PARSONS, E. Dudley, consultant in visual education, Minneapolis public schools, 1946 to date; high school science teacher, Washburn High School, Minneapolis, 1937-46; missionary teacher and later high school principal, Mussoorie, U.P., India, 1930-37; high school teacher northern Minnesota, 1928-30. B.A. Hamline University (St. Paul), 1928; M.A. University of Minnesota, 1941. Member DAVI Executive Committee; member, National Convention Program Committee, 1956-59; chairman Minneapolis Convention, 1958; attended Okoboji Conference 1957-60; co-chairman in 1959, and member of the planning committee for 1960; member, Technical Standards Committee. Member planning committee University of Minnesota Annual Audiovisual Institute; president AV Coordinators Association of Minnesota, 1958; member planning committee AVCAM Regional Leadership Conference, Clearwater Lake, 1957 to 1960.

SHERMAN, Mendel, assistant director of audiovisual center, Indiana University and associate professor of education since 1955; on leave as AV consultant, Ministry of Education, Thailand, 1958-60; AV supervisor, Cincinnati public schools 1947-55; military service 1943-47 (Signal Corps motion picture photographer and officer in charge of film and equipment exchanges, European Theater; special AV Mission to Denmark); thirteen years as elementary school teacher and principal. Also: visiting lecturer, University of Southern California, summer 1954, and University of North Dakota, summer 1950. A.B. (1933) and M.Ed. (1940) University of Cincinnati: Ed.D. (1955) University of Southern California. Member DAVI Executive Committee, 1958; member Board of Directors, 1957 and 1961; chairman DAVI committee on training and experience of AV coordinator, 1958; co-chairman section on individual schools, 1958 DAVI convention. Co-conductor of Des Moines survey for DAVI Field Service Committee, 1955; member survey team for Whittier (Calif.) schools. Survey of the Audio-Visual program, Chulalongkorn University, Thailand. Indiana University coordinator for Midwest Council on Airborne Television 1960; consultant to NEA Hagerstown TV workshop, 1957; producer and coordinator of television programs for Indiana University and Cincinnati public schools. Participant 1957 Lake Okoboji Conference and co-chairman 1961. Member AV committee, National Council for the Social Studies. Author of "Sherman Film Evaluation Profile" used by *Teaching Tools* to

Here Are Your Candidates

evaluate new motion picture and filmstrip releases. Also contributor to AACTE 10th Yearbook; AVI, *AVCR, Ed Screen,* other educational journals.

For Vice President

FULTON, William R., professor of education, University of Oklahoma, 1957 to date; director, audiovisual education, University of Oklahoma, 1946-57; head, department of education, Southwestern State College, 1942-46; school superintendent, Hammon, Oklahoma, 1939-42 and Granite, Oklahoma, 1935-39; principal, Blair, Oklahoma, 1928-35. Majored in economics, Oklahoma Baptist University, A.B., 1927; majored in school administration, Oklahoma A&M, 1937-39, M.S., 1939; attended George Peabody College, 1945-46; majored in school administration and audiovisual, 1950-55, Ed.D. Oklahoma State University, 1955. For 10 years DAVI representative to AACTE's coordinating committee (culminating in the Associated Organizations for Teacher Education); DAVI representative to AOTE since its inception in 1960; recently elected as AOTE representative to AACTE's executive committee for three-year period; chairman DAVI Teacher Education Committee for six years; director of two-year research project (U. S. Office of Education) in area of observation of pre-service teachers. Has attended every Okoboji Leadership Conference—conference co-chairman 1956 and chairman of planning committee 1960 and 1961. President Oklahoma Congress of Parents and Teachers, 1958-61, currently member of Congress's National Board of Managers as chairman of the School Education Committee. Past-president of the Oklahoma AV Association. Contributor to AVI, *Ed Screen, The Journal of Teacher Education,* and *Phi Delta Kappan.*

McBRIDE. Otis, head, department of audiovisual education and professor, School of Education, Florida State University, 1953 to date; dean of men and professor of English, 1946-53; visiting professor, Michigan State University, summer 1960, University of Colorado, summer 1961; U.S. Air Force, 1941-45; early career as English teacher; Texas and Oklahoma (one-time associate head of English department, Tulsa Central High School); also taught English and served as alumni secretary and director of placement bureau, Peabody College for Teachers. B.A. North Texas Teachers College; M.A. (1931) and Ph.D. (1941) George Peabody College for Teachers. Chairman DAVI Resolutions Committee, 1958-59; member DAVI Convention Planning Committee 1959, 60, 61 (registration chairman 1961); Committee on Buildings and Equipment, six years; area chairman, institutional membership drive, 1959-60; national chairman for institutional memberships, 1960-61; program participant National Convention, 1957-59; member Revision Committee for No. 1 *Planning Schools for AV Materials;* member Okoboji Planning Committee; participant Lake Okoboji Conferences, 1957-60. Member EFLA, NEA; member state board of managers and chairman PTA film library; board of directors, Florida AV Association; participant National Educational Television Conference, Indiana University, February 1959; organized Southern Regional Conference for EFLA in Tallahassee, 1958. Conducted materials clinics for three years with members of library school of Florida State University and State Department of Education.

WILLIAMS, Don G., director of audiovisual instruction and professor of education at the University of Kansas City; director of audiovisual center and professor of education, Syracuse University, 1948-59; associate director of AV center and director of motion picture production, Indiana University, 1947-48; research director, National Educational Films, New York City, 1946; U.S. Navy, 1941-45; chairman of audiovisual instruction for Berkeley (Calif.) public schools, 1940-41; psychology instructor San Jose State College, 1938-40; AV director Great Falls (Mont.), 1932-38 and science teacher, 1930-32; research assistant Anaconda Copper Company, 1927-30. B.S. Washington State College, 1927; Ed.D., Leland Stanford University, 1945. Active in DAVI since 1932 and member of several DAVI committees. Life member of NEA; past president, New York State Audio-Visual Council; founding member and past president University Film Producers' Association; member of CINE; trustee University Film Foundation; U.S. representative to International Film Festival at Cannes 1954, 1955, 1959; at Venice, 1956; at Rome, 1959; founding member and first chairman of the Audio-Visual Commission on Public Information; operated contracts for the State Department and acted as AV consultant for Iran, Turkey, Greece, Egypt, Lybia, Iraq, Korea and Tunisia, 1951 to 1959; directed ICA institute for AV leadership (19 trainees from overseas) 1955-56; author *Motivate, Teach, Train,* booklet published by Point IV (1952) and translated into 11 languages; contributor to 48th Yearbook of National Society for the Study of Education and 29th Yearbook of Association for Student Teaching. Conducted national survey of selected universities under grant from U.S. Office of Education (report to be published November 1961).

Delegates-at-Large (Choose Three)

DILWORTH, June, director of School Broadcasting, KCTS-TV, Channel 9, Seattle, Washington, June, 1961 to date. Formerly television coordinator of King County Schools, State of Washington; elementary school teacher in California and Washington; western consultant for *A Study of the Use of In-School Telecast Materials Leading to Recommendations as to Their Distribution and Exchange,* University of Nebraska under a U.S. Office of Education grant. B.A., Aurora College, Aurora, Illinois; graduate work at University of Washington and Seattle Pacific College; instructor summer session, School of Communications, University of Washington; television consultant, summer session, Central Washington College of Education. Currently active member of NEA, Washington Education Association, ASCD, DAVI, and WDAVI (state audiovisual organization); president-elect of WDAVI; member of editorial board of AVI; contributor to *WEA Journal,* 1957.

FORSDALE, Louis, professor of English, Teachers College, Columbia University, 1951 to date; also, at T. C., chairman, Interdivisional Program in Communication and the Communication Arts, and principal investigator, Project in Educational Communication, Horace Mann-Lincoln Institute of School Experimentation; visiting associate professor of education, offering audiovisual courses, University of Southern California, summer 1957; instructor in audiovisual education, Colorado State College of Education, summer, 1947; consultant in audiovisual education, Horace Mann-Lincoln School, New York City, 1946; assistant chief and chief, Instructional Aids Services, Command and General Staff College, Fort Leavenworth, Kansas, 1943-1945. B.A., Colorado State College of Education (1942), M.A. (1947) and Ed.D. (1951), Teachers College, Columbia University. Commissioned in Air Force during World War II as aerial photographic laboratory commander. Member, Columbia University Seminar on Public Communications; editorial consultant, AV Communication Review, 1955; chairman, Committee on the Study of Television, National Council of Teachers of English; member, Board of Directors, American Association for Better Broadcasts. Articles on educational communication have appeared in a number of journals. Member DAVI, National Council of Teachers of English, National Society for the Study of Communication, NEA, Society of Motion Pictures and Television Engineers, and other professional groups. Member, DAVI invitational seminar on The Professional Education of the General Audiovisual Administrator, 1960; member of the USOE-SMPTE invitational Conference on Audiovisual Apparatus, 1961.

Ballots will be mailed to all DAVI members December 1

Delegates-at-Large—Continued

HALL, Robert O., professor of education and director of audiovisual services, Alameda County State College, Hayward, Calif., 1960 to date; program associate for the National Educational Television and Radio Center, 1958-59; associate professor of education and cinema and head of the Department of Cinema, University of Southern California at Los Angeles, 1953-58; coordinator of AV education, Los Angeles County Schools, 1946-52; elementary school principal, Compton, Calif., 1941-42; elementary school teacher, Upland, Calif., 1939-40. B.S. in Ed., University of Southern California (1939); M.S. in Ed., USC (1941); and Ed.D., also USC (1953). Military service, U.S. Naval Reserve, 1943-45; lecturer in education, Whittier College (Calif.) summer session 1947 and 1948; visiting professor of education, University of Wisconsin, summer 1957; writer for film project in Iran under U.S. Information Service, 1954; consultant for ETV project, government of India, summer 1961. Contributor to AVI and *Teaching Tools.* Member, NEA, DAVI, Phi Delta Kappa, Audiovisual Education Association of California (president, 1949). Program chairman for 1961 DAVI national convention. Doctoral dissertation: *Listening.*

HUNTER, Armand L., director, division of broadcasting services. Michigan State University 1958 to date (WKAR-AM-FM; WMSB-TV; Closed-Circuit TV). Also at Michigan State: director of television development, 1951-58; manager WKAR-TV, 1953-58; acting head, department of speech, 1956-58; manager WMSB-TV, 1959. Educational director, WFIL-AM-FM-TV (Philadelphia) and chairman department of radio, speech, and theater, Temple University, 1947-51; chairman department of radio, and director, NBC-Northwestern Summer Radio Institute (Northwestern University) 1943-46; speech instructor and director of theater, University of Nebraska, 1938-41. A.B. (1935) and M.A. (1937) University of Nebraska; Ph.D. (1947) Northwestern University. Member, Advisory Committee Title VII, U. S. Office of Education; ETV station's representative to Midwest Council on Airborne Television; member Ad Hoc Planning Committee for NAEB-DAVI-NETRC and secretary of resulting Educational Media Council. Member DAVI Television Committee (also member of joint committee with Classroom Teachers for *ETV Primer*); Advisory Committee to DAVI President, 1957-59; DAVI invitational seminars. Active with National University Extension Association as: Chairman radio-TV committee 1953-56; chairman AV communications division, 1957-59; member advisory committee to Center for the Study of Liberal Education for Adults, 1956-59; board of directors, 1957-59. Activities with NAEB; secretary of organization, 1953-54; consultant on ETV 1951 to date. Other professional and honorary societies.

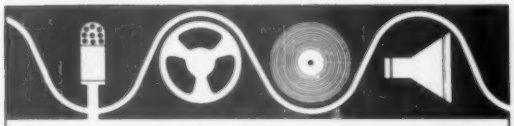
RUNNER, Ernestine, director of audiovisual education for the San Bernardino County Schools (the largest county in the U. S. consisting of 54 school districts), 1948 to date; instructor (extension division) University of California; instructor (summer session) University of Redlands and University of Southern California; former elementary school teacher in San Bernardino County. B.A. University of Redlands; M.A. (1958) University of Southern California. Member of former DAVI County and Cooperative Programs Committee, currently active in this occupational interest group. Served on nominating committee for 1959-60. President Audiovisual Education Association of California, 1959-60; member California Association for Supervision and Curriculum Development, Audiovisual Education Association of California, NEA, Pi Lambda Theta. Author of prize winning article in *Teaching Tools,* spring 1957; contributor to *Instructor,* summer 1956.

SEEL, Helen, supervisor radio and television, Cincinnati Public Schools, 1942 to date; early career in merchandising, and in teaching in kindergarten-primary and secondary schools; executive producer, Greater Cincinnati Junior Town Meeting League, 1943-1953; Board of Trustees, National Junior Town Meeting League, 1950-1955; member of the writing committee of the Junior Town Meeting publication "Youth Discussion on Television," 1953; charter member, Board of Directors, Cincinnati Children's Theatre, 1946 to present; active participation in Cincinnati's civic theatres: The Actor's Guild and Stage Incorporated. M.A. University of Cincinnati, 1950. NEA delegate to the Conference of the World Confederation of Organizations of the Teaching Profession in Copenhagen in 1952, Istanbul in 1955. Director of production for Cincinnati Public School project for Fund for Advancement of Education, 1957-1958; participant in the NEA Television Seminar, Washington, D.C., 1959; member of TV Teacher Preliminary Screening Panel, Midwest Project on Airborne Television Instruction, 1959-1960; television consultant for MPATI workshops in 1960-1961 at the University of Notre Dame, University of Louisville, University of Illinois, University of Toledo, Indiana University, and Miami University; local arrangements chairman for DAVI Convention, Cincinnati, Ohio, 1960. Vice president, Cincinnati Council on World Affairs and member of NEA, NAEB, OEA, and Delta Kappa Gamma.

STEPP, Robert E., head, Bureau of Audiovisual Instruction, and assistant professor, School Administration, University of Nebraska, 1953 to date; training aids officer, U. S. Navy, 1951-53; instructor, Music Department, University of Nebraska, 1946-51; U. S. Navy, 1942-46; instructor, Music Department, Central College (Mo.), 1940-41. A.B., Central College (Mo.), 1940; M.A., State University of Iowa, 1946; Ph.D., University of Nebraska, 1960. Co-chairman, National Planning Committe, 1962 DAVI Convention; member, editorial board, AVI, 1960 to date; regional DAVI membership chairman, Area 3, 1960; state DAVI membership chairman, 1959. Currently president Nebraska State Audiovisual Association and secretary-treasurer 1953-61; secretary-treasurer, division of audiovisual communication, NUEA, 1958-59. Member, NEA, Phi Delta Kappa, American Association of University Professors, Phi Mu Alpha. Editor, Instrumental Music Filmstrip Series.

WAGNER, Robert W., professor, and director of Motion Picture Division, Ohio State University, 1959 to date; head, Dept. of Cinema, University of Southern California, 1958-59; before that, head, Motion Picture Division, Ohio State; chief, Mental Hygiene Information Service, Ohio Department of Public Welfare, 1944-46; motion picture producer, Office of Coordinator of Inter-American Affairs, 1943-44; motion picture writer-director, Office of War Information Film Unit, 1942-43. B.S. and M.A. degrees, Ohio State, 1941; Ph.D. (Ohio State), 1953. Awarded Encyclopaedia Britannica Films Fellowship, 1952; president, University Film Producers Association, 1954-56; delegate, Third International Congress of Schools of Cinema and Television, Cannes, 1956. Presently editor of quarterly *Journal* of the University Film Producers Association, and editor, Media Dept., *AVCR;* member of Society of Motion Picture and Television Engineers, Academy of Motion Picture Arts and Sciences, National Society for the Study of Education; member of organizing committee of American Science Film Association. Conducted courses in film and radio production and audiovisual workshops at the University of North Carolina (1947), Colorado State College (1948), University of Southern California (1951, 1953), and University of Puerto Rico (1961).

WYMAN, Raymond, professor, School of Education, University of Massachusetts, 1958 to date; director of the AV center, University of Massachusetts, 1949-58; AV supervisor, Holyoke (Massachusetts) public schools, 1948-49; AV supervisor and science teacher, Westfield, Massachusetts, 1937-48. B.S., University of Massachusetts; Ed.M. and Ed.D., Boston University. Project director for *And TV Too!;* chairman, DAVI Television Committee; former president of Massachusetts AV association. Member, planning Committee for 1962 DAVI National Convention, advisory committee of Institute for Education by Radio-TV, and planning committee for Northeast Regional Conference. Contributor to *School Board Journal, Massachusetts Teacher, Educational Screen* and AVI.



Sound Learning through Living Sound

Educators rely upon Califone portable phonographs, tape recorders and sound systems to provide top fidelity and rugged service at prices well within budget.

califone *proudly presents* **two new models** *at remarkably low prices*

JET (3J) *CLASSROOM PHONOGRAPH*

4-speed, 8" turntable with built-in 45 RPM center. Plays 7", 10", or 12" records with lid closed. Locking arm rest with safety needle guard. Floating motor and pick-up deck prevents groove jumping. Separate volume and tone controls. Output jack for earphones or external speaker. Professional user net: $44.95 + Ex. Tax

COMET (70-T) *TAPE RECORDER*

Excellent performance at minimum cost. Records up to 7" reels at 3¾ or 7½ IPS. Heavy duty tape deck cannot break or spill tape. Chrome kickproof speaker grill. Compact case closes with 7" reels in position. Automatic shut-off when lid is closed. Microphone included. Professional user net: $199.50

WRITE TODAY for complete catalog.

Rheem califone CORPORATION
5922 Bowcroft Street, Los Angeles 16, Calif., Dept. AVI-9

FOREMOST MANUFACTURER OF SELECTIVE AUDIO-VISUAL PRODUCTS FOR EDUCATION

DID YOU SEE THIS AD IN SEPTEMBER?

Many of you have noted we did not print illustrations of the featured items.

YOU WERE ALERT!

In order for everyone to see these new products, we show them NOW in full detail.

JET (3J) *CLASSROOM PHONOGRAPH*

4-speed, 8" turntable with built-in 45 RPM center. Plays 7", 10", or 12" records with lid closed. Locking arm rest with safety needle guard. Floating motor and pick-up deck prevents groove jumping. Separate volume and tone controls. Output jack for earphones or external speaker. Professional user net: $44.95 + Ex. Tax

COMET (70-T) *TAPE RECORDER*

Excellent performance at minimum cost. Records up to 7" reels at 3¾ or 7½ IPS. Heavy duty tape deck cannot break or spill tape. Chrome kickproof speaker grill. Compact case closes with 7" reels in position. Automatic shut-off when lid is closed. Microphone included. Professional user net: $199.50

WRITE TODAY for complete catalog.

Rheem califone CORPORATION / 5922 BOWCROFT AVE., LOS ANGELES 16, CALIF. DEPT. AVI-11

FOREMOST MANUFACTURER OF SELECTIVE AUDIO-VISUAL PRODUCTS FOR EDUCATION

looking at new literature

Comprehensive Source List

IN COOPERATION with the U.S. Office of Education, Syracuse University has produced an up-to-date, completely annotated source of all available materials concerning audiovisual communication.

Each item is classified and coded according to medium and according to message (what the material covers—theory, description, utilization, production, research, and appreciation).

Instructional Materials for Teaching Audiovisual Courses, Syracuse University Press, Box 87, University Station, Syracuse 10, N.Y. 1961, 74 p., 60 cents.

The contents treat with general theory, graphic materials, display materials, non-projected and projected materials, broadcast and recorded materials, class activities, photography, administration, and specialized areas.

It should be noted that some of the listed items are dated. Nevertheless, it is good to have almost everything available in one source book. An interesting format makes the guide appealing to the eye.—ELLIOTT RABNER.

TV Materials Study

THIS IS THE REPORT of a Title VII study directed by Jack McBride and W. C. Meierhenry with the cooperation of a national advisory committee and ten regional consultants. As the result of depth interviews and an analysis, these conclusions were reached:

- Considerable instruction is being presented locally at the elementary, secondary, and higher levels of education by means of both broadcast and closed-circuit television.
- A backlog of recorded television instruction is available for distribution.
- The establishment of systems for the distribution of recorded televised instruction is urgently needed.
- An increasing number of institutions wish to use recorded televised instruction.
- Further study is necessary to discover the best methods of utilizing recorded televised instruction in the classrooms.
- Dissemination of information concerning recorded televised instruction is needed.
- Production and distribution of materials appropriate for use by television should be continued by both commercial companies and educational foundations.

The study recommends the immediate establishment of several differing pilot distribution centers prior to the establishment of a national system.—E. R.

A Study of the Use of In-School Telecast Materials Leading to Recommendations for their Distribution and Exchange. Station KUON-TV, University of Nebraska, Lincoln. 1961. 137 p., 50 cents.

Librarians Plan for AV

THESE PROCEEDINGS of the Institute's symposium at the University of Maryland in 1959 point up a significant fact: Many library planners are calling for facilities to accommodate equipment and materials.

Presented during the symposium was a series of floor plans with illustrative materials and statistical data. Comments and suggestions for improvement were made in each case.

Here are several examples:

U.S. Air Force Academy Library: "Also on this floor is the music room. It is equipped with a stereo hi-fi system, and the room seats 40 people. . . . The music room is also used for language instruction by the foreign language department, as well as by the English and history departments, and for meetings of various types."

Public Library, Moline, Illinois: Plans call for an audiovisual department with film previewing and storage facilities.

West Kinney Junior High School, Newark, New Jersey: Statistical data lists an instructional materials center which seats 20 and a special service in which librarians order and distribute audiovisual materials for the faculty.

Midland Senior High School, Midland, Michigan: Provides an audiovisual room of 385 square feet.

Administrators will be interested in the outlines on writing specifications. The section, "To Remodel or Not to Remodel," will also prove rewarding from several points of view.—E. R.

Guidelines for Library Planners. Proceedings of the Library Buildings and Equipment Institute, American Library Association. Chicago, 1960. 128 p.

English and the TV Age

A CONCISE, knowledgeable, professionally informed, yet readable contribution to television education. It is aimed at building up the confidence of English teachers to develop student skills for satisfactory and intelligent response to diverse communication forms.

Part I gives perspective and basic background material geared to the English teacher's approach to television as an educational and cultural medium. Part II suggests specific methods, materials, and activities for teaching about television. It takes into account variations in teachers' backgrounds, kinds of students to be instructed, and curriculum.

The book is an outgrowth of the Television Committee's continuing concern to make teachers aware of the untapped strength of television in teaching English, literature, and language arts. It is a must for the English teacher of any of the millions of students of all ages for whom television is their most persistent and magnetic source of information and a primary source of literary experience.—MRS. R. E. WOELFE, LIBRARIAN, WEST ORANGE MOUNTAIN HIGH SCHOOL, WEST ORANGE, N.J.

Television and the Teaching of English, Neil Postman and the Committee on the Study of Television of the National Council of Teachers of English. New York, Appleton-Century-Crofts, Inc., 1961. 138 p., $1.

Have You Seen These?

Explaining "Teaching Machines" and Programming, by David Cram. Fearon Publishers, 828 Valencia St., San Francisco 10. 1961, 86 pages, $2. A staff member of the Division of Audiovisual Services, San Jose College, Cram comes out with a programed explanation of programing. Foreword by Dick Lewis.

Educational Music Guide (Phonograph Records Recommended for Schools, Colleges and Libraries), 1961-62 Edition. Educational Department of Capitol Records Distributing Corporation, 1750 Vine St., Hollywood 28. Annotated listings in various categories (Music of the Dance, Opera, Elementary and Pre-School, etc.) are preceded by short essays. Irene Cypher is contributor in Sing-Along and Activity category. Highly visualized listing with photos of album jackets. 72 pages, 50 cents.

Television for School Science, a report on a seminar conducted by the Organization for European Economic Cooperation, Ashridge, England, July 1960. Free on request from OEEC Publications Office, 1346 Connecticut Ave., N.W., Washington 6, D.C. 181 pages.

An Automated Teaching System, A Teaching Machine, and Programmed Learning, organized and designed by staff members of the New York Institute of Technology. Second in a series of brochures published by the Institute for Instructional Improvement, Inc. Single copies free from the latter at 110 East 30th Street, New York 16.

For Your Journalism Teacher

The films listed here are available, free loan, from Copley Productions, P.O. Box 1530, La Jolla, Calif.

CITY ROOM — A documentary of a modern newspaper city room. Viewers follow a news story through all phases to the final printing in the daily edition. Color, 18 min. Also available in Spanish sound track. Designed for journalism and printing students.

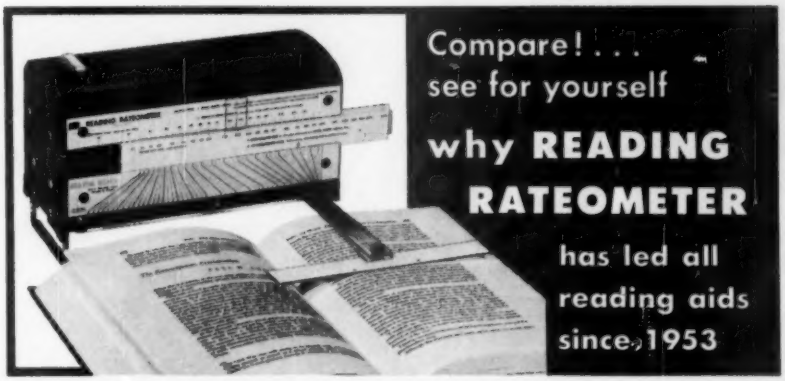
R O P COLOR—A basic film on newspaper Run of the Press Colors ads. Designed for those interested in technical phases of ROP color. Detailed attention to treatment of color mats, autoplates, etc. Color, 29½ min. Also Spanish sound track.

CLASSIFIED: AMERICA'S MARKET PLACE—A presentation of the technical procedures of a classified department, its products and services. Designed for journalism and printing students. Color, 23 min.

FROM TYPE TO PAPER—A film combining animated cartoon figures and "live" actors, showing the earliest forms of man's written records from the stone age to modern newspaper presses. Narrated by Marvin Miller. Animated voices Mel Blanc. In Spanish sound track also. Designed for printing students. Color, 29 min.

A MISSION OF PRIME IMPORTANCE—An on-the-spot documentary showing how an American newspaper official helps change the format of a South American newspaper, at the same time retaining the established personality of the paper. Designed for printing students. Color, 13 min.

TRIBUNE DEADLINE—An encompassing view of the immensity and complexity of the daily newspaper. A well conceived and realistic film of workers and their duties in the newspaper industry. Color, 21 min.



1. SO DURABLE its useful life is not yet known

Most of the original 1953 RATEOMETERS are still in daily use, because of their functional design and built-in lasting qualities, including the lifetime electric motor and only two other working parts. And the 1961 RATEOMETER is even more durable.

Through constant research and development, 11 important improvements have been introduced without noticeable model change. Motor is twice as powerful. Wear points have been minimized through the use of nylon, hardened steel and berylium copper. Face is now coated with matt finish clear plastic to provide a non-glare and scuff-resistant protection for instructions and speed scales.

2. ACCURATE AND NOISELESS as an electric clock

No spring or air-driven reading pacer can approach the quiet accuracy of the rugged electric motor-driven RATEOMETER. Silicone lubrication provides lifetime protection. Its speed can never vary, because its rotation is controlled by the constant impulses in the electric current. This proven accuracy and dependability has resulted in nationwide use of the RATEOMETER in reading research programs.

Only the Rateometer has a heavy duty electric motor equal to those used in industry for heavy-duty timing devices.

3 MODELS MEET ALL NEEDS

MODEL A	1-4 units	$39.95
Standard range	5-9 units	35.95
70-2500 words/min.	10 or more	33.95
MODEL B	1-4 units	39.95
Slower range	5-9 units	35.95
20-500 words/min.	10 or more	33.95
MODEL C	1-4 units	42.95
Faster range	5-9 units	38.65
140-5000 words/min.	10 or more	36.50

When in doubt on model choice, order the Model A

10% Discount on School Orders

3. UNEQUALLED SIMPLICITY OF USE

No separate tables or slide rules for the RATEOMETER! Reading speed readings and settings are made right on the plastic face of the unit in a manner so simple that a grade school child can use the RATEOMETER unaided after a few minutes of instruction.

4. UNEQUALLED EFFECTIVENESS AND VERSATILITY

The RATEOMETER is at home in classroom, library or home study—with required or elective reading. Users find enjoyment, challenge, encouragement and motivation which assure improvement in reading speed and comprehension. Reading speed doubles in 10 to 20 half-hour practice sessions. Many reach much higher speeds. Only the RATEOMETER has three models with three speed ranges to meet every need.

SATISFACTION GUARANTEED, OR YOUR MONEY REFUNDED

Mail orders to

AUDIO VISUAL RESEARCH

523 S. Plymouth Court Dept. AV-111 Chicago 5, Ill.

Write for illustrated folder on AVR Dagmar Microfilm Reader and Camera

LENSCREEN
By POLACOAT

KEEP THE CLASS "HEADS UP"

Conduct your "Visual Aid Classes" in a fully lighted room. Eliminate projector noise and sight distraction.

Lenscreen rear projection holds attention . . . allows the taking of notes . . . facilitates supervision while slides or films are being shown.

Gives sharp, clear pictures in black and white or full fidelity color.

There's a Lenscreen to fit your specific teaching need.

Send for the LENSCREEN information kit, today. No obligation, of course.

POLACOAT, INCORPORATED
9700 Conklin Road Blue Ash, Ohio

Journal Films OFFERS

ESSENTIAL SCIENCE-CONCEPT films
curriculum complements for primary and intermediate SCIENCE

WHAT'S SO IMPORTANT ABOUT A WHEEL? *10 Min.; Color, B/W*

"We have found this film a valuable tool for teaching." *Saugus, Mass.* Rated 4.9 out of possible 5. *El Paso, Texas.*

LET'S LOOK AT LEVERS *10 Min.; Color, B/W*

Lift and pry; work and play; pinch and cut; Muriel Beuschlein of Chicago Teachers College made sure it would be valuable to teachers and students.

LEARNING FROM PETS in the CLASSROOM

Richard Hubbard, Univ. of Wis., has helped make this an unique contribution toward creation of a good classroom environment for the study of science.

SPRING IS A SEASON *11 Min.; Color, B/W*

"Your 'Spring is a Season' is being so well received that we wish to keep the print." *Geneva, Ill.*

All Available under NDEA Title III
Preview prints on request

JOURNAL FILMS, INC.
909 W. Diversey Pkwy. Chicago 14, Ill.

KING COMMENTS

(after long silence)

THERE ARE MANY TIMES when the old saying, "An ounce of prevention is worth a pound of cure," is very appropriate. How many times have you, as an administrator, wished that you had recordings of certain conversations in your office?

If you had a Walkie Record-All, your problem would be solved. The unit comes in its own case and to the casual observer, or even to a more critical eye, it looks like a regular briefcase. The recording mechanism and microphone are complete in the case and, when turned on, will record anything within a 60-foot radius.

The unit records on a plastic belt and embosses on the belt rather than recording magnetically. (Because of this fact, a recording made on this belt is admissible in a court of law while a recording made on a tape recorder, which can be edited, is not. A recording on a Record-All belt cannot be changed.)

Among available accessories is one which operates the recorder only when a person speaks.

For additional information, write Miles Reproducer Co., 812 Broadway, New York City.

. . .

Someone once said that women's styles complete a cycle and that if you wait long enough, an out-of-date fashion will be back in vogue. The same thing holds true with cameras. The Graflex Company is now advocating their Crown Graphic No. 23 for school use. It is modeled after the regular press camera but gives a 2¼x3¼-inch picture. Lighter and less expensive than other types, it is preferred by many photography classes for all-around school use. Deserves your inspection.

. . .

Viewlex has just released their Model TT-1, Table Talk Unit, which was shown for the first time at the DAVI Convention in Miami Beach last April. It combines a table-top filmstrip viewer and a four-speed record player complete with four jacks for headphones.

With this unit one or more students can sit in the back of a classroom and use a filmstrip or phonograph record as supplemental or enrichment material. It is not necessary to darken the classroom, set up a projector, or get a screen. All that is needed is a table and electric outlet.

Some schools are using equipment of this type in the school library for individual or small group instruction. What, if anything, are you doing with this kind of equipment in your school?

. . .

For some time now Polaroid has had on the market their 4x5 Polaroid Back to be used in press cameras. They also have film especially for this adapter. Recently I was given the assignment of taking two pictures for a state publication. The editor in question was not sure of the shots he wanted. The Polaroid 4x5 turned out to be the ideal solution. The 4x5's were shot, approved and later the regular film was shot at the same spot. A newspaper photographer on the scene was much impressed. He said he was going to recommend to his paper that this procedure be used on assignments where time was not a factor.

—WILLIAM H. KING

SVE Catalogs

Religious, 1962 Edition. Over 50 new filmstrip titles. Listing contains these categories: Bible, Christ, Christian Living, Church and Missions, God and His World, Worship, Holiday.

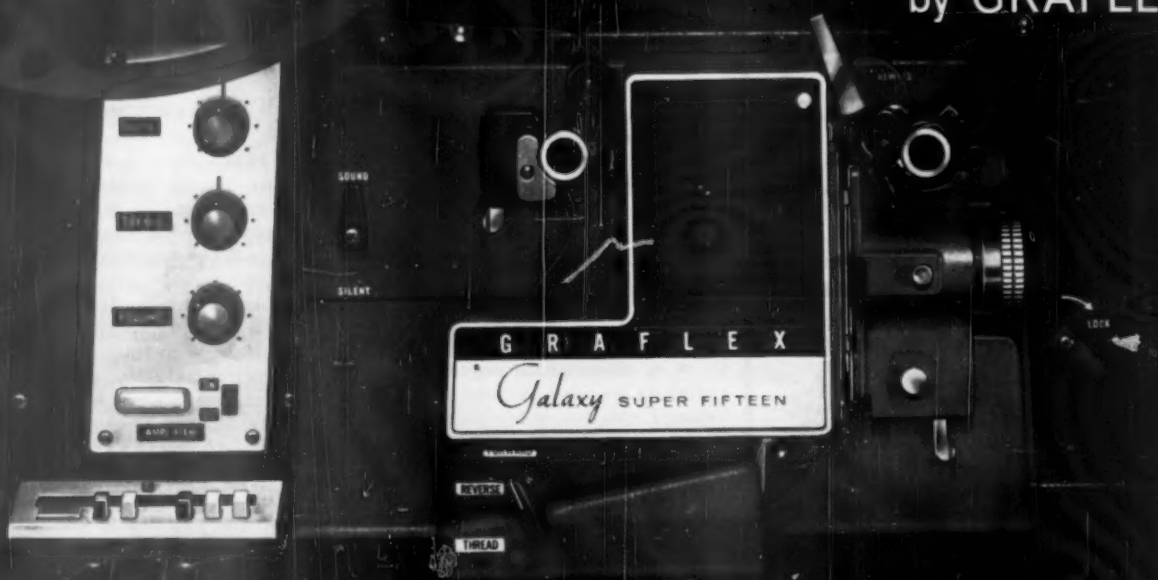
Fall 1961 Filmstrip Catalog. Over 200 new titles for all grade levels through high school. From Society for Visual Education, Inc., 1345 Diversey Parkway, Chicago 14.

New EFLA Listing

Films for Children is a selected list of 205 16mm films in these categories: Animation; Circus, Farm, and Zoo; Fables, Legends, and Fairy Tales; Favorite Story Books on Film; Holidays; Nature and Wildlife; Pets; Puppets; Real Life Adventures; Silent Film Comedies; Story Films; and, Ways of Life. Essays by Peretz William Johnnes and Morton Schindel take up first 18 pages of 59-page catalog. $1.50 from Educational Film Library Association, 250 West 57th Street, New York 19.

Newest, *Brightest* Picture...
Newest, *Truest* Sound...
Newest, *Simplest* Operation...

ALL EXCLUSIVELY with the all-new Galaxy® by GRAFLEX



Never thread a sound head again! Slide film into the convenient diagonal slot. Flip a single lever. Film is positioned, sound loop formed and sound head threaded—all instantly, *automatically!*

ALL NEW, THE MANY Galaxy features include an exclusive high-intensity lamp. Internal dichroic reflector eliminates light-absorbing, dust-catching condensers and external reflectors, and reduces heat on the film a full 50%!

Only Galaxy gives you the advantage of a unique new high-intensity lamp. Through push button controls two-levels of illumination are provided—"Normal" and "Hi." At "Normal," equivalent to 800 watts, lamp life is extended 10 times—to a minimum of 150 hours. For long auditorium throws, to bring life to dense prints, or for projection with a minimum of room darkening, the "Hi" setting delivers the equivalent of 1200 watts, a brilliance surpassed only by carbon arcs. For the finest sound in 16mm, Galaxy introduces an exclusive hiss-free phototransistor pickup. Plus a full 15-watt transformer-powered high-fidelity amplifier and removable speakers. For the first time you are provided with separate controls for bass and treble, for new richness in music, new clarity in speech, new quality in sound.

Fast and easy to set up and rewind, with exclusive push-button control, Galaxy is simpler, smoother, and quicker in operation than any other. Arrange with your Graflex AV dealer for a demonstration of its new exclusive advances in projector performance —or write to Graflex.

GRAFLEX®

Rochester 3, New York. In Canada: Graflex of Canada Limited, 47 Simcoe St., Toronto 1, Ontario A SUBSIDIARY OF GENERAL PRECISION EQUIPMENT CORPORATION GPE

IS YOUR FILM...

• Dirty? • Scratched?
• Brittle? • Worn?
• Stained? • Rainy?
• Damaged?

Send it to

THE FILM DOCTORS®

Specialists in the Science of
FILM REJUVENATION
FOR 16 MM AND 35 MM
RAPIDWELD Process includes treatment for:
• Dirt • Abrasions
• Scratch Removal • "Rain"
8MM SERVICES NOW AVAILABLE.

Send for free Brochure, "FACTS ON FILM CARE".
Dept. C.
RAPID FILM TECHNIQUE, INC.
37-02 27 ST., L. I. C. 1, N. Y.
STillwell 6-4600 • Est. 1940

The Amazing
Electronic Educator!

The Electronic Educator is an amazing new scientific device designed to train and teach at both the conscious and subconscious levels. You read, speak or transcribe recorded material thru the microphone, where it is recorded on special endless tape cartridges holding from 1 min. to 2 full hours of tape. This tape repeats itself and your message endlessly to give you the necessary repetition to memorize material. Comes complete with mike, Slumber Speaker, timer and cartridges. Offers thousands of uses from learning languages to helping backward students. -Write for free descriptive literature. Sleep-Learning Research Ass'n. Box 24-T Olympia, Washington.

• • • •

The Electronic Educator is also an inexpensive, portable language lab. Student can record his lesson then hear both his own pronunciation and the recording at the same time. Use it for music lessons too. Will record and endlessly repeat any music or lessons recorded. Students can accompany self without instructor being present.

Executive Committee Delineates DAVI's Major Problem Areas

MEETING IN A NEW KIND of session at DAVI headquarters early in October, the Executive Committee brainstormed for a day and a half. Upon adjournment they agreed that they had turned up very little that was new, but felt satisfied they had delineated and discussed in some detail DAVI's major problem areas.

Here are some areas in which DAVI will likely begin action during the Tiemann administration:

- A rekindling of efforts to set some kind of standards for pre-service teacher education and to get these accepted by accreditation agencies at the state department level.
- A drive to involve affiliates more fully into organizational activities.
- Attention to the audiovisual coordinator as the best recruit upon which to build the DAVI organization.
- A campaign to improve the administrative climate for AV. (Who should be the primary targets—the teacher? the school superintendent? state departments of education?)

These problems were not hammered out in a vacuum. In the conversations at the NEA such terms as *target, role,* and *image* emerged and were aired.

Dudley Parsons introduced the premise that learning takes place in the classroom; therefore, the primary target for DAVI is the teacher (with all the implications for pre- and in-service education, administrative climate, etc.). Other committee members favored the "administrator" approach and there was some discussion of what could be accomplished through working with the school superintendent's professional organization—the AASA. Dr. Hyer pointed out that AASA has embarked on a program to upgrade the pre-service education of superintendents. New course requirements will be written. This is significant for several reasons. It affords DAVI the possibility of working with the school superintendents in determining what basic information administrators should have about the AV field; and secondly, it indicates a trend. DAVI, Dr. Hyer reminded the Committee, has never made any systematic attempt to identify what constitutes satisfactory AV coverage for the pre-service education of teachers. The Committee agreed that many of the AV experiences offered by schools of education are scarcely worthwhile. Therefore, before a further attempt is made to get more AV into the teacher education curriculum, it probably behooves the audiovisual field to take a good look at the current offerings.

The best approach, Dr. Hyer suggested, might be for DAVI to get out a publication on "promising practices" —if the institutions with effective audiovisual practices could be identified.

Dudley Parsons thought a greater effort should be made to get AV materials used in the general college curriculum. He suggested state and regional demonstration conferences (probably with joint sponsorship by the Association for Higher Education) which would analyze instructional problems. With traditional methods of instruction, Dudley said, small, private colleges are pricing themselves out of the market. This is an example of an area where DAVI could be of some service. Other targets identified were the junior college movement, the student organizations of the NEA, and the building coordinators.

It was generally agreed that the latter are the missing link as far as DAVI is concerned. Dr. Hyer questioned whether in fact coordinators as a group exist. How many schools, she asked, have functional AV coordinators officially appointed by the principal. Dudley Parsons maintained that coordinators do exist—but not professionally. Making them professionally aware, he volunteered, should be the function of the affiliates. He asked what the national office can do to encourage and support the affiliates in such an endeavor.

The question was raised as to how far DAVI wants to go in this direction. In many organizations there is a move to weed out all but professional members. If—as is the current practice of DAVI—you let anyone join just because he has $7, you get a heterogeneous membership which is difficult to serve. On the other hand, if you put a premium on membership—set certain qualifications that members must meet—the serious coordinator will see membership as a desirable step in furthering his career. Somewhere there

is a law of diminishing returns on how much money you spend to get members. Marginal members probably don't contribute much to an organization and account for high drop-out rates.

Other Committee members demurred. You can never gauge a member's potential beforehand, they said. If he's willing to spend $7 he's pretty sure to be genuinely interested. The consensus was that future AV leadership would roll up out of the ranks of the building coordinators and that DAVI should work through the affiliates to make them aware of their professional identity.

Several plans were suggested for involving affiliates—perhaps the most promising is to bring affiliate presidents into NEA headquarters for annual meetings. A really effective measure, Dr. Hyer suggested, would be to couple an orientation meeting at headquarters with a field consultancy plan for affiliates similar to the DAVI Field Service Plan which has successfully conducted surveys in schools and universities. Other suggestions involved regional meetings for affiliate presidents with a member of the national staff or executive committee in attendance; a part-time staff member in the national office working only with affiliates; questionnaires sent to affiliate presidents in an effort to determine what services are needed; and, news sheets from the national office which the president would read at affiliate meetings.

"Role" Is Continuing Concern

Creating a favorable administrative climate for AV has long been a concern of DAVI. In the discussions of the Executive Committee it became involved with DAVI's "role" and "image." DAVI, according to Dr. Hyer, has been described by some groups as employing "pressure tactics" and as being controlled by commercial interests. The latter criticism overlooks the fact that "commercial people" in the AV field are as a rule educators also, she pointed out.

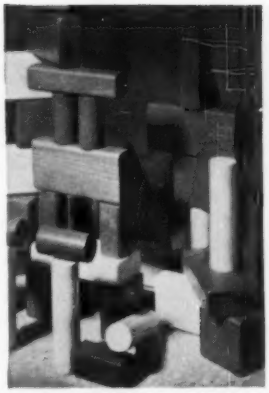
To counteract this unfavorable image are other signs of acceptance and growth. It was pointed out that many organizations seek help and advice from DAVI at the national level. DAVI leadership has been recognized in the teaching machine and language laboratory field. The many liaison activities reported in the September issue are indicative of increased standing among other professional groups.

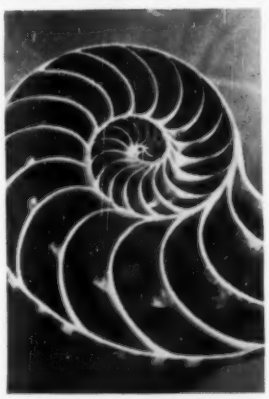
In reporting on a recent conference on curriculum experimentation in Minneapolis—sponsored for and by content people—Dudley Parsons said that although he never heard the term "audiovisual" mentioned, not a single development was reported but what AV was not an integral part of it. He said that sophisticated use of audiovisual materials was evident in many of the curriculum experiments described, for instance, such as those of the Physical Science Study Committee. These are content people, Dudley pointed out, not audiovisualists. Perhaps we've done our job better than we think.

We may actually be working ourselves out of a job in some sectors, Dr. Hyer said. In that case we ought to be looking for new directions in which to move. If we cling to the old routines, like the railroads we'll die, she commented.

Dr. Tiemann said that once DAVI has fully developed the area of teaching resources, it must move into organization. It must become involved with team teaching, small and large group instruction, building design, and so on. Bob Snider added that the audiovisual specialist already has a

(See the next page)





DISCOVERING SOLIDS

A new film series in mathematics from Cenco Educational Films

This is a series of five, 16mm sound, color films for junior and senior high schools that lifts solid geometry from the textbook and the chalkboard into an exciting, visual concept of three-dimensional objects, and how they affect our daily lives.

The six common solids; cubes, prisms, cylinders, pyramids and spheres are explored and explained in detail. Through animation, these solids are evolved from simple shapes, planes and lines. Formulas for finding the volumes and the surface areas of the solids are carefully developed for the student.

Titles of the five films in this series are:

- **Solids in the World Around Us**
- **Volumes of Cones, Prisms and Cylinders**
- **Volumes of Pyramids, Cones and Spheres**
- **Surface Areas of Solids I**
- **Surface Areas of Solids II**

Each 15-minute film is available in color for $150, or black and white for $75. Contact your Cenco salesman for further information, or write directly for Booklet 502.

CENCO EDUCATIONAL FILMS

A Division of Cenco Instruments Corporation
1700 Irving Park Road • Chicago 13, Illinois
Mountainside, N. J. Montreal Santa Clara
Somerville, Mass. Toronto Los Angeles
Birmingham, Ala. Ottawa Vancouver Houston
Cenco S.A., Breda, The Netherlands Tulsa

HE Shows
Educational Films in a Lighted Classroom

Patent Pending

HE HAD TO

There was no other way.

Blocked by a tight budget, concerned about teachers who shied away from time-consuming, complex techniques, he tried the rear projection concept.

Working with his administrator, they purchased a Wilson Movie-Mover RP—a rear projection unit that used their present projector—guaranteed to show motion pictures and filmstrips in undarkened rooms to their complete satisfaction.

Cost? Less than darkening one room—only $139.50 or $159.50 plus a few dollars more for a wide angle lens. That's all.

The RP unit rolled effortlessly on 4" casters, brought brilliant, sharp pictures to every room on his school's floor.

Teachers loved showing films. And so easy. Film utilization went up, teacher resistance went down. The RP unit was wheeled into their classrooms completely set up, ready to run. They merely flicked a switch. That's all.

Today, hundreds of Audiovisualists have purchased, used and re-ordered additional RP units. If you haven't, we'd like to demonstrate so you can decide if and where the RP fits into your AV program.

H. WILSON CORPORATION
546 W. 119th St., Chicago 28, Ill.

Please send brochures on Wilson rear projection unit.

NAME_____

SCHOOL_____

ADDRESS_____

CITY & STATE_____

Executive Committee—Continued

growing responsibility in the area of administration.

Suggesting some other new directions, Miss Hyer cited several interpretations of the DAVI role: the pandemic role introduced by Robert Shayon at the Miami Convention (the pandemic man, it will be recalled, is the one who mediates between theorist and practitioner); Jim Finn's interpretation of the instructional technologist; and Charter's "educational engineer" now being revived by Finn and Dale (see page 434).

Other labels offered in a further attempt to clarify the DAVI role were "facilitator" and "innovator." The facilitator label seemed apt to most Committee members but was objected to on the grounds that it has no connotation of leadership. As Abe VanderMeer pointed out, it doesn't take into account that the audiovisualist generates ideas and creates knowledge of instruction.

Dr. Tiemann observed that DAVI's claim to the innovator role can be justified at the national level. Our magazines and national conventions attest to this fact. But what happens at the local level where the superintendent has to make a decision about the capabilities and orientation of the audiovisual specialist he is hiring. There DAVI's leadership image appears to be fuzzier. Thus, the Executive Committee seemed to feel that equally as important as clarifying the DAVI role was translating it into action at the local level.

Ramifications of IM Concept

Dr. Hyer said that the instructional materials concept has won acceptance from administrators faster than specialists can be trained. In the whole United States there are no more than a handful of persons truly trained for the job of materials specialist.

Dudley Parsons said he thought the instructional materials concept still valid but that it should perhaps be reinterpreted to embrace coordinate functions. In Minneapolis, he said, the instructional materials center is staffed by a librarian, AV consultant, TV consultant, and publications specialist.

It was suggested that DAVI re-activate the Librarian-DAVI joint committee whose functions it was presumed at one time would be taken over by the Educational Media Council. It might be a wise move the Executive Committee thought, for this joint committee to work out the details of what kind of program is needed for the instructional materials specialist.

When Dr. Hyer was asked to identify areas of DAVI concern from the viewpoint of the national office, she listed these five: (1) raising the professional level of the AV field; (2) raising the professional level of individual members; (3) defining DAVI's role in relation to other disciplines and organizations; (4) defining and achieving its own role (whether that of pandemic individual, innovator, facilitator, or instructional technologist); and (5) solving the problems of internal organization such as membership (how extensive does DAVI want it to be), what kind of service should be offered, and so on.

At the close of their meeting the Executive Committee agreed that their discussions had produced few firm guidelines. They felt however that they had accomplished their purpose by generally defining problem areas. It was pointed out that the purpose of the DAVI Commissions and Committees is to perform as study groups and

Stik-a-letter
PROFESSIONAL LETTERING TECHNIQUE
Write for literature
Stik-a-letter Co. Rt. 2, Box 1400, Escondido, Calif.

Non-Hardware
TEACHING MACHINES
For performance-centered learning and intrinsic programming.
*COMMON-CORE methods
"TRAINER-TESTER" devices (Reg. U.S. Pat. Off.)
SHOW-HOW services
Licenses available, U.S. and foreign patents
* Synthetic Simulation® (U.S. Reg. No. 674,338)
* Printechnic® (U.S. Reg. No. 671,332)
* Trainer-Tester Printechnic® (U.S. Reg. No. 671,333)
* Service Mark
For information, write
VAN VALKENBURGH, NOOGER & NEVILLE, INC.
15 MAIDEN LANE, NEW YORK 38, N.Y.

Free Tapes, Scripts, and Transcriptions
The Free Tapes, Scripts, and Transcriptions you need to enrich and vitalize teaching are listed, classified, and separately indexed by Title, Subject and Source in the New, 1962
EDUCATORS GUIDE TO FREE TAPES, SCRIPTS, AND TRANSCRIPTIONS
Edited by Walter A. Wittich, Ph.D., Professor of Education, University of Wisconsin
Available for $5.75 on 30-day approval
EDUCATORS PROGRESS SERVICE
Dept. AVI, Randolph, Wis.

to chart definite courses of action. Thus it was agreed that a report of the Committee discussions should be circulated to the DAVI Division coordinators. Executive Committee members will also study the report to determine if it suggests some action that falls beyond the scope of the DAVI Committees or Commissions. These unique matters will be reviewed at the Kansas City Convention with the hope that decisions can be made as to priorities and courses of action. Some of the problems will probably be plowed back into the Convention discussions of the School and College groups (formerly occupational interest groups).

During an evening business meeting the Committee took action on these matters.

• *Appointment of the Resolutions Committee:* Sherman Swartout, Walter Bell, Carolyn Whitenack, Betty Stoops and John Dome were named to work with Chairman Dudley Parsons. State affiliates and Division Coordinators should refer pertinent items to Mr. Parsons.

• *Appointment of Nominating Committee for 1962-63:* J. K. East, George Ingham, Paul Reed, Robert Powell, Robert Gerletti, Leone Lake, Verne Stockman, Ray Wyman, and William Gnaedinger were appointed to work with Chairman Ernest Tiemann.

• *Professional Ethics:* A memo from the NEA Committee on Professional Ethics requesting cooperation from all NEA departments in developing a revised code of ethics was referred for implementation to the DAVI Commission on AV Standards and Ethics.

• *Teacher Audiovisual Awards:* After discussing a proposal made by Paul Reed for states to make audiovisual awards to teachers, the following motion passed: That an *ad hoc* committee be appointed to recommend to the Executive Committee at Kansas City national procedures for presenting through each state affiliate an annual citation to a teacher for outstanding use of AV materials. Such citations shall be presented by the state superintendent of public instruction, the affiliate president and perhaps AV members sponsoring the teacher. Paul Reed was appointed chairman of the committee to prepare the recommendations.

• *Divisional Coordinator Report:* Robert Snider summarized the report of the DAVI Divisional Coordinator's meeting September 8-9. (See report on page 478.)

• *Okoboji Recommendations:* President Tiemann circulated pre-publication copies of the recommendations made by the Seventh Lake Okoboji Audiovisual Conference and asked for discussion. In view of a particularly successful meeting and pertinent topic —The Role of the Communications Specialist in the 1960's—and because so many of the Okoboji recommendations fall within the province of the newly appointed DAVI Commissions and Committees, the Executive Secretary was asked to mail copies as soon as possible to all Division Coordinators.

• *Catalog of World AV Organizations:* The Committee left to the discretion of the national office a request from Howard Kresge, chairman of the DAVI International Relations Committee, that DAVI publish a manuscript listing audiovisual associations around the world. There was some discussion as to how much interest such a listing would have for DAVI members. The national office will welcome reactions from readers.

Members of the Executive Committee present at the Washington meeting were: Ernest Tiemann, Clyde Miller, Dudley Parsons, Leone Lake, Verne Stockman, and members of the DAVI staff. James Finn and William Allen were unable to attend. A. W. VanderMeer was present only for the half-day session on October 3.

For language classes and wherever the spoken word must be reproduced clearly and realistically, try economical Language Arts Recording Tape . . . developed to meet the special needs of today's educators.

tick! tick!

Maybe you don't remember the magic tick tick of Dad's alarm clock . . . or the excitement you felt at the tiny sound of his key turning in the lock.

But don't despair. Children and grownups alike can experience exciting moments in sound. Try Audiotape and see.

Audiotape is particularly suited for music appreciation classes because it offers maximum clarity and range, minimum noise and distortion. There are eight types . . . one exactly suited to the next recording you make.

audiotape
"it speaks for itself" TRADE MARK
AUDIO DEVICES INC., 444 Madison Ave., New York 22, N.Y.
Hollywood: 840 N. Fairfax Ave., Chicago: 7321 N. Hamlin Ave., Skokie, Ill.

try triton tape

Triton, the premium magnetic recording tape, is engineered to stand up under rugged, day-in-day-out use. Exclusive Trionized process minimizes oxide shed, head friction, recorder wear and tear. And it's guaranteed: **If the quality of Triton Tape is deficient for any reason whatsoever, we will replace it with whatever brand you prefer.** Complete, no-risk Guarantee Certificate included with every reel. For clean, full-response recordings only quality tape can give, try Triton.

Write for free brochure and educator price list V-11

triton

TRITON ELECTRONICS, INC.
62-05 30th Avenue, Woodside 77, N. Y.

Represented in Canada by Abbey Electronics Ltd.
555 Wilson Ave. Downsview, To., Ont.

New Committee Structure Implemented

Coordinators Meet at NEA

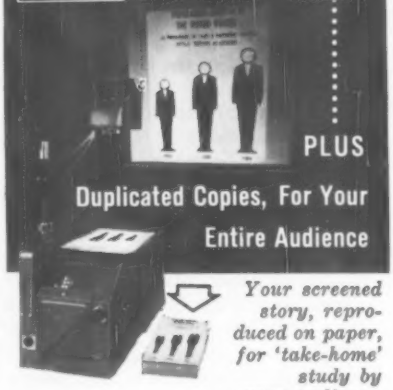
Robert C. Snider

THREE OF THE five divisional coordinators overseeing DAVI's complex structure of Groups, Committees and Commissions met at NEA headquarters September 8-9 with President Ernest Tiemann and members of the DAVI staff. The meeting made it possible for these leaders to consult with the president and make further recommendations to the Executive Committee concerning DAVI's program for the next two years.

These recommendations have since been approved by the Executive Committee:

- The name of the Division of Program Sections (William Allen, coordinator) was changed to the Division of School and College Groups. Henceforth all "committees" in this Division and the Division of Professional Specialization will be known as "groups." DAVI members will be assigned to them on the basis of interest expressed on their DAVI membership card questionnaire. No other record of membership in these Groups will be maintained. A steering committee will be appointed for each Group in the two Divisions mentioned above. (It was recommended that each of these steering committees have a membership of approximately five people, and that they be appointed by the same method used in appointing other DAVI committees.) Steering committees will be responsible for working with the DAVI National Convention Committee in planning portions of the Convention program when appropriate. It should be clear, however, that the Convention Committee has final and complete authority on Convention activities. A steering committee working with its divisional coordinator may also become actively involved in special projects and recommend the appointment of subcommittees to accomplish these projects.
- In the Division of Operational Committees the following changes were recommended: (1) That the Committee on Membership and Affiliate Relations be divided into two committees: Membership Committee (Carlton W. H. Erickson, chairman)

MAKE YOUR OWN
TRANSPARENCIES



PLUS
Duplicated Copies, For Your Entire Audience

Your screened story, reproduced on paper, for 'take-home' study by your audience.

LESS THAN 15 MINUTES TO PRODUCE BOTH TRANSPARENCY AND DUPLICATED COPIES!

No more skill or knowledge is necessary than that required to turn an electric switch. This automatic process will not only give you a detailed transparency of your original art but it will also produce a stencil, at the same time, from which you can run off exact, print-like quality copies on the stencil duplicator. Yes, halftones, too! The GESTETNER Process features the GESTEFAX Electronic Scanner which automatically produces both the transparency and duplicating stencil . . . in minutes . . . for pennies . . . in a single operation.

Gestefax

Original art or layout is electronically reproduced on both stencil and plastic sheet.

by the makers of the
Gestetner
Famous Dual-Cylinder Stencil Duplicator

Now . . . classes, sales groups, board members, etc., can take with them duplicated copies of the screened presentations for further study and easier recall. Distracting note-taking is eliminated. It means greater learning potential in less time.

GESTETNER CORPORATION
216 Lake Ave., Dept. T-113 Yonkers, N. Y.
Send descriptive literature and specimens.

NAME_____
COMPANY_____
ADDRESS_____
CITY_____ STATE_____

and the Committee on Affiliate Relations which will have as its chairman each year the president-elect of DAVI; (2) That the following committees be removed from the Division of Operational Committees and be made responsible to the DAVI Executive Committee: Auditing, Membership, Convention, and Nominating; and (3) That the Professional Placement Committee be dissolved and future policy matters involving placement be referred to the Executive Committee.

Assignments

ASSIGNMENTS in the Division of Professional Development were:

1. *Commission on Research* (Loran Twyford, chairman): (a) Study and develop effective methods for analysis and dissemination of available research reports; (b) Study and develop methods and/or programs for upgrading training of research workers; (c) Act as a consultative group to coordinate research activities within DAVI and outside research activities that are pertinent to the field; (d) Identify needed research and evaluate pertinent research underway and completed; (e) Encourage and/or initiate research in needed areas and identify priority projects (in "gap areas" where research is needed); (f) Assume responsibility for identifying and handling research papers to be presented at DAVI Conventions; (g) Prepare a listing of qualified and experienced research workers in the field of AV instruction with their special fields of interest, present work, etc.

2. *Commission on Technical Standards* (Philip Lewis, chairman): Study and develop standards and guidelines for production and/or selection of physical facilities, buildings, and equipment as they relate to instructional technology.

3. *Commission on Professional AV Education* (Paul Witt, chairman): (a) Develop guidelines to establish a program for the professional education of the instructional communication educator and the several specialists involved in instructional technology; (b) Identify and describe programs currently available for such training; (c) Establish standards and criteria for graduate programs and take steps to see that these standards are universally met; (d) Professional placement service at DAVI Conventions.

4. *Commission on Professional AV Standards* (Robert Gerletti, chairman): (a) Develop standards of professional ethics for AV personnel; (b) Maintain liaison with NEA's Committee on Ethics in the field of education; (c) Develop standards concerning the size and qualifications of professional AV staff for schools of various size; (d) Develop quantitative standards concerned with such matters as quantity of equipment, percent of school budget for AV, etc.

5. *Commission on Definition and Terminology* (Donald Ely, chairman): (a) Define the parameters of the field of instructional technology and identify a suitable title which gives meaning to the field as well as to the professional person responsible for implementing a program of instructional technology; (b) Identify and define the categories inherent in the field of instructional technology; (c) Develop a comprehensive glossary of terms relating to instructional technology.

6. *Commission on Teacher Education* (Garland Oliver, chairman): (a) Study the changing role of the teacher and administrator in preparing for the optimum utilization of instructional communication; (b) Identify the new competencies needed by teachers with special reference to instructional communication; (c) Study current standards for the accreditation of teacher

(Continued on page 480)

Betsy clapped her hands gleefully, exclaiming, "I declare, Herbert, you remind me of my favorite movie."

Herbert, whose antipathy to the usual Hollywood product was well known, drew himself up to his full two feet eight and snarled, "Which, pray, is that?"

"Why you simpleton," Betsy giggled, "Wonders in Your Own Backyard, of course."

*Churchill-Wexler films are now distributed by Churchill Films.

NOTHING SUCCEEDS LIKE SUCCESS

with PSSC PHYSICS FILMS . . .

. . . and the teaching of high school physics with the aid of these 16mm-sound films is now recognized as a solid success.

In a congratulatory message to PSSC founder Jerrold Zacharias, President Kennedy said, "The products of your work have already started a revolution in science teaching in the United States."

The number of teachers using PSSC Physics Films has more than doubled from the 1959-60 school year. The number of orders received for the coming year shows the same remarkable increase.

This noteworthy success represents quick recognition by science teachers of the effectiveness of PSSC Films in introducing new topics, enriching course material and showing difficult experiments. These physics films make it possible for you to show the experiments that must be done with materials too small, too large, too remote, too complicated or too expensive for the school laboratory.

PSSC Films are also recognized for their ability to supplement lecture and textbook in a way that stimulates the student's natural curiosity and guides him toward a sound understanding of basic principles.

These films correlate readily with whatever physics text you are now using, and you may select any number of them. They may be obtained from Modern Learning Aids, their official distributor, in any one of three ways: purchased with NDEA funds, used on a subscription basis or acquired on a lease-to-buy arrangement. MLA's nationwide network of 30 film libraries insures prompt and dependable delivery.

For the success of the physics courses in your school this fall, order now. Descriptive folder, correlation sheets and order blanks available on request.

MLA

MODERN LEARNING AIDS

A Division of
Modern Talking Picture Service
3 East 54th Street, New York 22, N. Y.

COMMITTEES—CONTINUED

education institutions and develop recommendations of acceptable modifications; indicate additional standards which should be adopted in the future.

ASSIGNMENTS for the Division of Operational Committees were:

1. *Committee on Archives and History* (Ellsworth Dent, chairman): (a) Maintain, add to, publicize and further the DAVI archival collection located at Iowa State University; (b) Encourage and, when possible, assist in the study of the history of education and more particularly the history of the audiovisual movement; (c) Identify and recommend individuals to receive DAVI awards.

2. *Committee on International Relations* (Howard Kresge, chairman): (a) Continue the compilation of a list of world-wide audiovisual organizations as well as a listing of AV specialists in all parts of the world; (b) Work through the National Education Association's delegation to the World Confederation of Organizations of the Teaching Profession to establish a meeting of national AV groups to be held in conjunction with their annual meeting; (c) Give serious consideration to the compilation and publication of an international AV bibliography, listing all AV periodicals and certain other kinds of publications; (d) Publish a list of AV sources in this country in all languages (Farmington Plan AVCR 1954); (e) Assist in supplying the international editor of *AV Communication Review* with suitable material; (f) Investigate the possibility of having ICA publications (such as *The Multiplier*) distributed to DAVI members; (g) Work actively toward having AV organizations in other countries become affiliated with DAVI; (h) Supply DAVI members (presumably through *AVCR, AVI* and other channels) with information concerning international film festivals and other activities of interest to the audiovisual profession; (i) Represent DAVI at meetings of the NEA's Committee on International Relations.

[It was further suggested that large committees such as this one establish steering committees, and that an inexpensive newsletter be sent out occasionally to DAVI institutional members and the Board of Directors.]

3. *Committee on Legislation* (Charles Norford, chairman): (a) Suggest to the DAVI Executive Committee possible and appropriate positions and courses of action to be assumed

(Continued on page 482)

KEYSTONE now offers you . . .

PROTECT-A-PRINT LEADER

- Avoid Misthreading Damage!
- Avoid Film Scratch

PROTECT-A-PRINT LEADER is designed specifically to prevent print damage from dirty projectors and careless misthreading. Its special coating automatically cleans dirty projectors and its extra toughness automatically avoids misthreading damage.

Intensive tests, and the experience of hundreds of users, have proved that PROTECT-A-PRINT LEADER is highly effective and thoroughly safe! Your satisfaction is unconditionally assured.

Write for further information or a demonstration by our Local Representative:

KEYSTONE VIEW CO., Meadville, Pa.

Since 1892, Producers of Superior Visual Aids

Exclusive Distributor of Protect-a-Print Leader to the Educational Field.

CLEAR MIRROR-LIKE REPRODUCTION with

BURGESS MAGNETIC RECORDING TAPE

★ LOW NOISE LEVEL
★ SUPERB FREQUENCY RESPONSE
★ HIGH SENSITIVITY
★ UNIFORM, TROUBLE-FREE PERFORMANCE

Remarkable Burgess engineering developments have produced an audio tape of superlative quality.

1. Micro-finished surface and built-in lubrication eliminates tape squeal and reduces recording head friction.

2. Improved pre-coating process produces a superior bond, eliminating flake-off so that recording heads stay clean.

3. Revolutionary dispersion process produces tape with high sensitivity, extraordinary frequency response, eliminating print-through, and delivering mirror-like sound reproduction.

SERIES	TYPE	REEL SIZES
111	1.5 mil ¼" All Purpose Plastic	3, 4, 5, & 7"
150	1.0 mil ¼" Extra Play Mylar *	3, 5, & 7"
102	1.5 mil ¼" All Purpose Mylar *	5 & 7"
190	1.0 mil ¼" Extra Play Plastic	5 & 7"
200	.5 mil ¼" Double Length Tensilized Mylar *	3, 5 & 7"
* Mylar is a Trade Mark of DuPont		

NATIONALLY ADVERTISED

in top-flight consumer magazines read by tape recording enthusiasts.

See your Burgess Distributor or write

BURGESS BATTERY COMPANY

DIVISION OF SERVEL, INC.

MAGNETIC TAPE DIVISION

FREEPORT, ILLINOIS NIAGARA FALLS, CANADA

Manufactured by the makers of Burgess Batteries.

BURGESS

They're *Learning* A Foreign Language . . .
with the new Viewlex
SIGHT AND SOUND
LANGUAGE STATION
that *every* school can afford!

From Viewlex—leader in compact audio-visual equipment—comes the new Sight and Sound Language Station . . . the truly low cost foreign language teaching aid. Designed for individual or small group instruction, Viewlex Language Stations utilize colorful film strips and up to 12" records to enable one, two, three or four students to "see" the meaning of words, phrases and sentences as they are spoken in their authentic manner.

Built into a portable luggage-type carry case, the Viewlex Language Station can be moved easily from room to room. Individual earphones prevent sound from carrying—permits several Stations to operate at one time. Large libraries of record and filmstrip combinations are available in almost all languages.

With the lowest cost-per-student of any *audio* language system, the EXTRA benefit of *visual* study makes the Viewlex Sight and Sound Language Station a truly worthwhile adjunct to your foreign language curriculum.

Model #TT-1
Complete with 4 sets of earphones $149.95
Write today for complete literature and/or demonstration. No obligation, of course.

For entire classroom or large group instruction,
◀ Viewlex Models WR-A and WHD-A Language Stations are also available.
Feature separate speakers and remote control filmstrip projectors.

Model #WR-A $184.50
Model #WHD-A $219.50

QUALIFIED FOR PURCHASE UNDER NATIONAL DEFENSE EDUCATION ACT

Viewlex INC.
4 BROADWAY, HOLBROOK, L.I., N.Y.
In Canada—ANGLOPHOTO LTD., Montreal

COMMITTEES—CONTINUED

and pursued as DAVI policy on federal legislation affecting the AV field; (b) Implement DAVI legislative policy through testimony before Congressional committees and through other appropriate methods; (c) Establish, on a state and local basis, channels through which audiovisual leaders can be quickly apprised of the legislative situation in Washington and through which appropriate action can be efficiently mobilized.

4. *Committee on DAVI Service Packets* (Carolyn Guss, chairman): (a) Identify, evaluate, and select appropriate materials to be included in DAVI service packet mailings.

5. *Committee on DAVI Memorial Scholarships* (Margaret Divizia, chairman): (a) Administer DAVI Memorial Scholarship Fund; (b) Administer DAVI Memorial Scholarship program and select individuals to whom scholarships are to be given.

6. *Committee on Resolutions* (Dudley Parsons, chairman): Gather, write, and propose appropriate resolutions to be passed at the annual business meeting of DAVI.

7. *Committee on Affiliate Relations* (Clyde Miller, chairman): (a) Review the Handbook for DAVI affiliated organizations, and revise it when necessary; (b) Strive to establish executive liaison with each DAVI affiliated organization for the purpose of dealing realistically with problems pertaining to elections, campaigning, interpretation of the DAVI Constitution, and other incidental problems; (c) Work with the DAVI International Relations Committee in establishing affiliated organizations in other countries; (d) Concern itself with recommendations and proposals concerning unified dues, affiliate publications programs, and other areas of mutual concern to DAVI and its affiliated organizations.

8. *Committee on DAVI Okoboji Leadership Conferences* (Lee W. Cochran, chairman): Work with the State University of Iowa and Teaching Film Custodians, Inc., in planning Okoboji Leadership Conferences, their personnel, and programs.

9. *Committee on Field Services* (Mr. Cochran, chairman): Continue its program of providing expert consultation to school systems and colleges for evaluating their present AV programs and for planning future ones.

10. *Committee on Organization and Constitution* (Walter Bell, chairman, 1961-62): [This permanent commit-

(Continued on page 484)

A better way to improved reading

The new, tested Craig Reader Programs now offer the first fully-integrated reading improvement programs designed to provide individual instruction in the class to assure maximum progress for each student—yet, free the instructor for the more creative aspects of his work in the classroom.

Fully Portable: this tabletop teaching aid weighs but 15 pounds, assures flexible use in changing classroom locations, is ideal for laboratory programs.

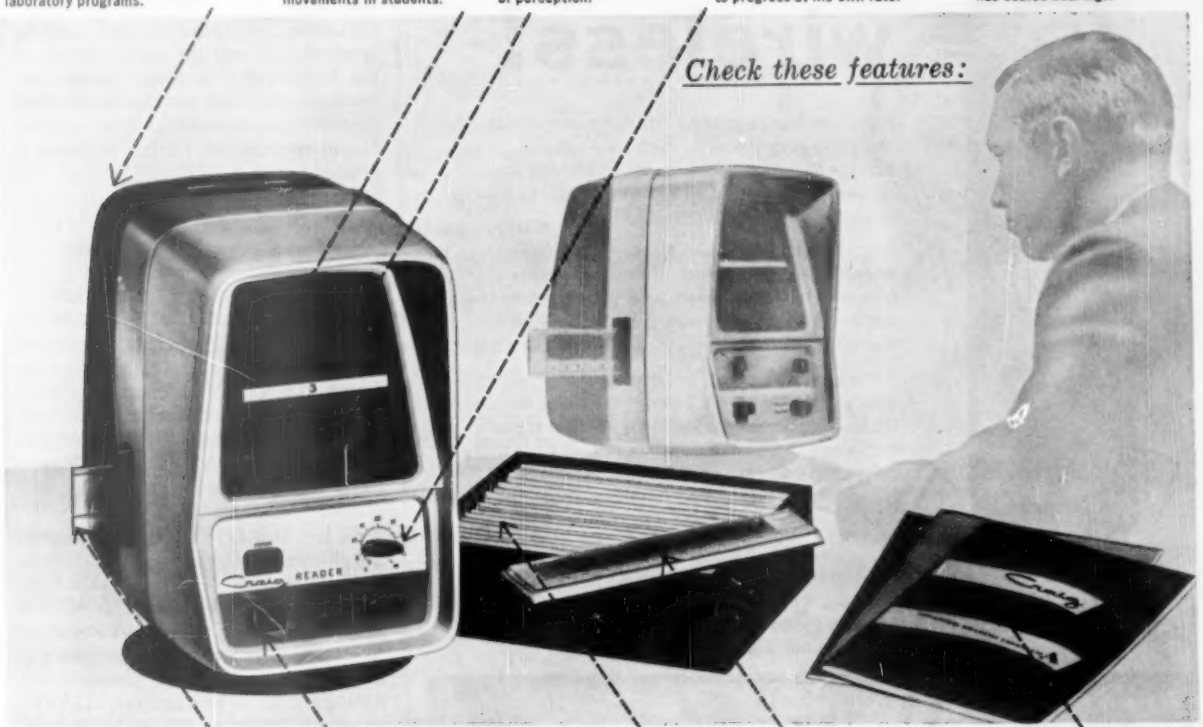
Automatic Advance Reading Training: uses Expanded Line technique to develop more efficient eye movements in students.

Serial Tachistoscopic Training: to improve both concentration and memory while expanding the field of perception.

Maximum Progress: variable speed adjusts to permit reading speeds of 100 to 2,000 words per minute, enables individual to progress at his own rate.

Trouble-Free Operation: engineered with the highest quality electronic components; motor requires no lubrication, has sealed bearings.

Check these features:



No Film Threading, No Rewinding: Craig-Slide units engage automatically, feed automatically for complete reading cycle by pressing a button.

Push Button Operation: elimination of mechanical operating distraction provides more rapid progress of student.

Individually Oriented Programs: permit individual instruction in the class in recognition of widely varying reading and comprehension abilities.

New 12 Frame Rigid Slide Units: exclusive Craig-Slides contain 12 film frames in each slide, load easily, advance automatically, and remain in constant focus.

Practice Reading Manual: assures that newly acquired skills are transferred to the actual reading situation.

The reading program for individual progress and more creative teaching

Craig READER*

*Trademark/Patent Pending

A PRODUCT OF CRAIG RESEARCH INC., A SUBSIDIARY OF CRAIG CORPORATION

Low-cost Craig Reader Programs offer every school and university complete, fully integrated reading improvement programs for individual instruction in the class.

COMPLETE INFORMATION on Craig Reader Programs for individual instruction in the class now available ...mail this coupon today.

CRAIG RESEARCH, INC. A-1
3410 South La Cienega Blvd., Los Angeles 16, California

Please forward information on Craig Reader Programs.

NAME _____ TITLE _____
(please print)

SCHOOL OR ORGANIZATION _____

ADDRESS _____

CITY _____ ZONE ____ STATE _____

My interests are: ☐ Elementary reading ☐ Jr. High School ☐ Sr. High School ☐ College

ACTUAL SIZE

This microphone is *different* – it's wireless!

We call it the Vega-Mike.* It looks somewhat like an ordinary lavalier-type microphone. But there is no trailing cable to restrict your movement. Nothing to get entangled, to kink or cause awkward interruptions.

The wireless Vega-Mike frees you to walk anywhere in the auditorium or classroom, face any direction, even turn your back to the audience . . . yet have every word you speak distinctly amplified.

It's a one-piece unit, so lightweight (only 7½ ounces) you're hardly aware of wearing it. Its size is only 1" by 5¼" long. Within these miniature dimensions are contained a mercury-cell battery power supply, a fully professional broadcast-quality dynamic microphone, and a transistorized wide-band FM transmitter.

The Vega-Mike transmits through the air to its matching specially designed portable receiver, which is simply connected to a public-address system amplifier, tape recorder, or other similar equipment.

Lavalier Vega-Mike | Hand-held Vega-Mike | Vega-Mike Receiver

Designed and manufactured in the United States, the Vega-Mike Wireless Microphone System is sold worldwide only through franchised Vega dealers. For a free six page brochure describing this equipment, and for the name of the closest Vega dealer (who'll be pleased to give you a no-obligation demonstration) write to VEGA ELECTRONICS CORPORATION, P. O. Box 145-D, Cupertino, California.

VEGA ELECTRONICS CORPORATION

*TM REG

COMMITTEES—CONTINUED

tee will be made up of the six preceding past presidents of DAVI and will be chaired each year by the president of DAVI two years removed. When new chairmen are appointed, the past president with the earliest term of office (as president) will be automatically dropped from the Committee, thus limiting it always to six members. This Committee will concern itself with a continuing study of the need for re-structuring DAVI committee organization and making recommendations on such matters to the Executive Committee. In this capacity, it will keep watch over the new Constitution—assuming it is adopted —and recommend further revisions if needed.]

Division of Professional Liaison

This Division includes the following joint committees, associations, and councils: Associated Organizations for Teacher Education, Educational Media Council, Learning Resources Institute, Joint Teaching Machine Committee (DAVI, American Psychological Association, and the American Educational Research Association), DAVI-American Association of School Librarians-Association of College Reference Librarians, DAVI-ASCD, DAVI-NAEB (National Tape Recording Project), DAVI-National School Public Relations Association (Du Pont Film Project). In general, it will be necessary for all DAVI representatives to joint associations and committees to become aware of their purpose and nature and to understand fully DAVI's responsibility in each case. Because of the extreme diversity of purpose among the units in this Division, the following responsibilities were developed for the divisional coordinator: (1) Advising on pertinent matters of policy and direction to DAVI members concerned; (2) Assisting as needed in selection of members for such assignments; (3) Receiving and transmitting reports of activities to appropriate groups within the Division, to the DAVI Executive Committee and to other DAVI groups concerned; (4) Consulting and advising the several chairmen on problems which may arise.

The Division of Professional Specialization

As indicated earlier, Groups within this Division will be made up of DAVI members on the basis of professional interests which they indicate on the DAVI membership card questionnaire.

(Continued on page 486)

"Teacher's Pet"

No wonder teachers are singing the praises of the Tecnifax Transpaque projector. It not only provides them with a versatile tool for improved instruction, but also offers a combination of advantages not available with any other overhead projector:

NO "STAGE-GLARE" . . . the Transpaque's unique optical system concentrates light on the *screen*, not in the teacher's eyes.

HIGH LIGHT-OUTPUT . . . projected images are bright and sharp . . . no need to pull down shades, or dim the lights.

LOW SILHOUETTE . . . no high projection head to interfere with pupils' view of the screen.

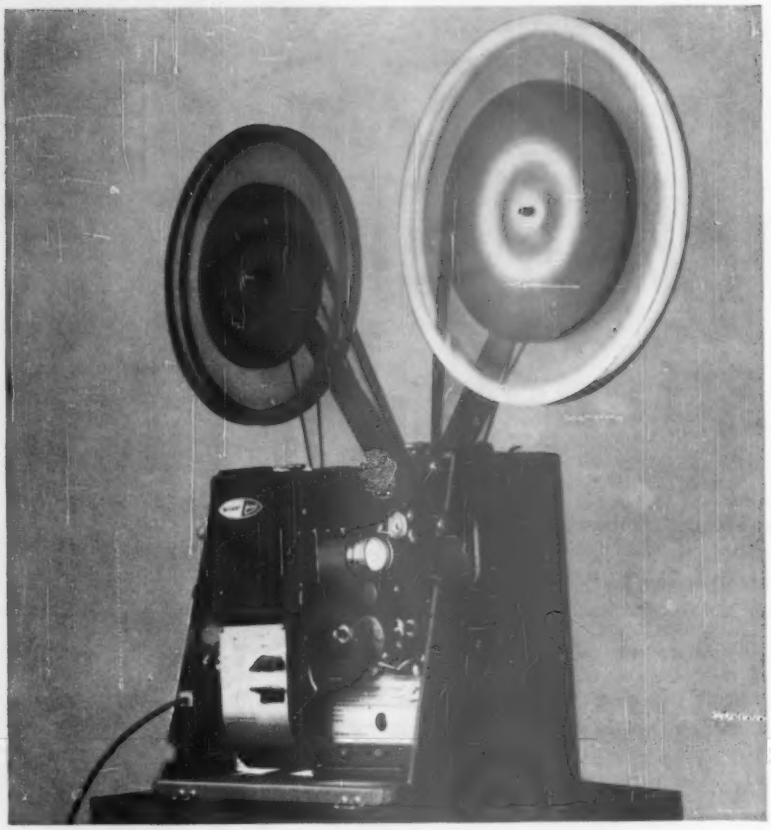
STABILITY . . . the Transpaque's broad base and low center of gravity insure trouble-free performance under all conditions.

Furthermore, Tecnifax provides, without charge or obligation, training in the utilization of the overhead projector. This enhances its effectiveness in the classroom. For additional information on the Transpaque projector and the Tecnifax training programs, please write to Tecnifax Corporation, Holyoke, Massachusetts.

THE TECNIFAX TRANSPAQUE PROJECTOR

TECNIFAX
CORPORATION
Manufacturers of
Visual Communication
Materials
and
Equipment
HOLYOKE, MASSACHUSETTS

"It's Easy to do Business with Tecnifax"



The Dependable One

There's something very comforting about the way a Kalart/Victor projector runs. Whisper quiet. Almost without effort. And above all, dependably. It's *always* ready to put on your program.

One reason is the lubrication system designed exclusively for Kalart/Victor projectors. Oil is metered from a large reservoir on "demand feeding" by means of a wick. Parts are given only the amount of oil they actually require. There can be no leakage because the oil travels *upward* through the wick by capillary action. One filling of this oil reservoir keeps the projector running smoothly for some 1,200 hours, or a full year of heavy use. What efficiency!

Of course, there are a score of other features that contribute to Kalart/Victor's reputation as the *dependable* 16mm sound projector. Your authorized Victor Audio-Visual Dealer will be more than pleased to point them out to you.

Free — "A Treasure Chest of Audio-Visual Ideas." New edition of practical booklet is tailored to needs of teachers, administrators, school boards, planners and others. Send now for your copy. Address your request to Victor Animatograph Corp., Dept. 74

KALART VICTOR

World's Most Experienced Manufacturer of 16mm Projectors

VICTOR ANIMATOGRAPH CORP., DIVISION OF KALART, PLAINVILLE, CONNECTICUT

They will provide an organizational gathering point—"a home" for individuals in the audiovisual field who have specialized interests, responsibilities, and assignments. They will insure interchange between these specialized fields, disseminate information about their activties, and serve as a bridge between them and other DAVI members. They will also provide a means of planning and executing programs at the DAVI National Convention.

Nelle Lee Jenkinson

Nelle Lee Jenkinson, still known affectionately as "Miss Nelle Lee" to many of her former pupils, died at her home in St. Louis September 26. She was assistant director of the division of audiovisual education of the St. Louis Public Schools.

She joined the audiovisual division in 1937 after an early career as a much beloved high school teacher at Festus, Jefferson County, Missouri.

Miss Jenkinson received her bachelor's degree at the University of Missouri, did post-graduate work at the Universities of California and Wisconsin and Washington University. She was granted her master's degree from Teachers College, Columbia University, in 1941. She was a member of DAVI, ASCD, the National Council of Administrative Women in Education, and the Association for Childhood Education International.

She was also a member of Delta Kappa Gamma, honorary for women in education, and Alpha Zeta Pi, foreign language honorary.

Thomas E. Batson

The DAVI national staff was shocked and saddened by the news of Thomas E. Batson's death after a brief illness in August. As a teacher of architecture at McKinley Technical High School, Washington, D.C., Mr. Batson was a not infrequent visitor to the national office and always generous with his services.

In 1960 Mr. Batson was one of 17 teachers awarded fellowships for summer travel by the Meyer Foundation. He visited the West Indies and parts of South America making color slides of the people, industries and customs.

DAVI members will recall his architectural illustrations in the Planning Schools for Use of Audiovisual Materials series. A teacher who loved his profession, Mr. Batson conducted evening classes at Armstrong High School and the Veterans Administration. His classroom at McKinley was said to be a marvel of meaningful equipment.

"Vous fait très bien, étudiants!"

Of course the students are! "Doing fine", that is. Turner microphones reproduce sound especially clearly. They make foreign attempts at foreign language sound like foreign attempts – sound like mistakes. And this teacher certainly knows the benefit of that: she can immediately recognize a mistake to correct it. Turner – one of the pioneers in this field – designs microphones especially for language lab applications. No wonder they make teaching easier (learning, too).

This Instructor is using the Turner 585D, a fixed-mounted dynamic microphone. Output level, –58 db; Response, 50-12,000 c.p.s.

Attractive chrome finish, die-cast housing on a 16" gooseneck. List price $32.50.

For more information, write for illustrated 585D brochure.

THE TURNER MICROPHONE COMPANY

948 17th St. NE • Cedar Rapids, Iowa

EXPORT: Ad Auriema, Inc., 85 Broad St., New York 4, N.Y.

CLASSROOM RECORDER

This new dual-track monaural recorder combines professional features with classroom-engineered durability and ease of maintenance. ① Rigid, one-piece, die-cast aluminum deck for positive permanent alignment of all mechanical parts. ③ Simplified transport mechanism, completely self-compensating for wear. ⑧ Standard NARTB record and playback compensation for interchangeability of tapes and true reproduction of pre-recorded tapes. ④ 10-watt transformer powered high-fidelity amplifier. ⑤ Large 9″ oval dual-cone extended range speaker. ⑥ Straightforward classroom-designed controls with operating instructions right on the face. ⑦ Headphone or speaker monitoring. Can be used as PA System. ⑧ Instant selection of 3.75 or 7.5 ips speeds. ⑨ Scuff resistant silver brown fabricoid-covered ¾″ plywood case with metal corners and knees. Generous storage spaces for reels, microphone, and AC cord. ⑩ Only 22 lbs. ⓊL ATC 100M

$299.25 list

$199.50 SCHOOL NET

ALL ATC PRODUCTS ARE TRANSFORMER POWERED FOR COMPLETE SAFETY

AUDIOTRONICS

11057 WEDDINGTON STREET, NORTH HOLLYWOOD, CALIFORNIA

News Notes

THE PROS AND CONS of forming a Texas Association of Audiovisual Representatives were discussed at a meeting in Austin, September 5. Further action was expected in Galveston during TEXAVED's annual meeting.

• • •

The Wisconsin AV-TV project for in-service training has begun its third schedule. The project (as reported in the February 1961 AVI) operates by means of a team teaching approach, kinescope lessons, and related reading materials. Broadcasts in the new schedule have begun in these cities: Alpine, Texas; Durham, New Hampshire; Corvallis, Oregon; Columbia, South Carolina; Orono, Maine; and Morgantown, West Virginia.

A fourth schedule is planned for the second semester of 1961-62, and arrangements are being completed for a broadcast over an inter-island network under the auspices of the University of Hawaii. L. Clinton West of the University of Wisconsin is interim project director in the absence of Walter Wittich, currently on leave to the University of Hawaii.

• • •

"Tomorrow's School" was the theme of a conference November 13-14 sponsored by the College of Education, University of Oklahoma. Held in Oklahoma City, the meeting emphasized programing, data-processing techniques in scheduling, new building designs, the role of the small high school, and implications of emerging trends in secondary education for school administrators.

• • •

The Educational Film Library Association has announced its fourth annual American Film Festival for April 25-28, 1962, at the Biltmore Hotel in New York City. For information about film entry blanks and jury assignments, write to EFLA, 250 West 57th St., New York 19.

• • •

Librarians meeting in a special section at the Annual Conference of the Georgia Teachers Association early in October chose as their theme: "Instructional Materials for Today's Schools." Among participants in the Atlanta meeting were Paul W. F. Witt, professor of education, Teachers College, Columbia University and Robert C. Snider, assistant executive secretary of DAVI. Dr. Witt gave the opening address and Dr. Snider spoke on the impact of new media on school libraries.

*NEW from RCA**

Micro-Projector shows specimens to whole class... adds convenience, economy to science instruction!

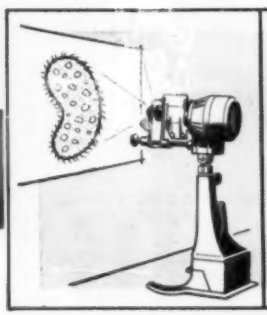
RCA's new Micro-Projector is a basic "must" for every science classroom. Through the RCA Micro-Projector, the whole class *together* sees live specimens or prepared slides. This lightweight and versatile unit actually eliminates the need for individual microscopes!

RCA Micro-Projector operation is highly simplified—a single knob controls focusing and specimen stage movements. Two precision ground condenser lenses, an objective lens and high power lens provide pictures of exceptional resolution; two polarizers produce interesting and vivid effects in studying crystallization. Converts quickly to a microscope for individual study of specimens merely by addition of an eyepiece. A telescoping column adds further clarity when projector is used for table-top study.

Safety is another built-in RCA feature—a heat filter absolutely protects specimens, even through an entire class period, while the heat baffle dissipates lamp heat for safer, more comfortable use. All wiring is concealed and shielded.

Here's equipment built to last, to perform perfectly for years to come. Take a long look very soon at RCA's new Micro-Projector. Your RCA Audio-Visual Dealer will gladly give you the full details . . . he's listed in your classified directory under "Motion Picture Equipment and Supplies." Call him today, or write RCA Educational Electronic Products, Meadow Lands, Pa.

**A new product and a new idea... one-stop shopping for all educational electronic equipment! See your RCA Dealer, for the most comprehensive line for every school.*



SHARP IMAGE DEFINITION UP OR DOWN

UP . . . projects image on wall or screen for entire class to see. Makes possible magnification of more than 2000 X.

DOWN . . . projects 8¾" circular image on tabletop for tracing or close study by groups.

RCA

The Most Trusted Name in Electronics

RADIO CORPORATION OF AMERICA

New Bogen VP20 portable transcription player is making a hit with instructors and their classes. Designed by the long-time leader in high-fidelity sound to incorporate performance features teachers want, precision-built for quality reproduction, packaged in rugged carrying case that rates A+ for looks, lightness, compactness.

PERFECT SPEED CONTROL lets you play records at whatever tempo you set, without creep. Continuous speed control from 29 through 86 rpm . . . instant speed selection of 16, 33⅓, 45, and 78 rpm.

"FEATHER-DROP" AUTOMATIC CUEING FEATURE raises and lowers stylus at any spot you choose, by the turn of a knob: protects records and stylus, guarantees noiseless cueing.

SPECIAL TAPE TAKE-OFF lets you put an entire program on tape, play it back through the VP20 amplifier and speaker.

OTHER FEATURES AND SPECIFICATIONS include 20 watts peak power output . . . inputs for 2 microphones and radio tuner . . . G.E. variable reluctance phono cartridge . . . scratch filter and separate treble and bass controls . . . accommodates up to 16" diam. discs . . . complete in sturdy, attractive portable case with heavy-duty 12" speaker. Doubles as public address system for special school events.

LIST PRICE OF THE VP20 IS ONLY $184.20, a professional quality instrument at a phonograph price. Slightly higher in the West.

FOR LARGER GROUPS, the companion VP40 has a 40-watt peak power amplifier, two heavy-duty 12"speakers, professional turntable, all mounted in two matching portable cases.

Write for full details or call your Bogen distributor.

BOGEN-PRESTO

Desk AV-11–Paramus, New Jersey—A DIVISION OF THE SIEGLER CORPORATION

News Notes—Continued

COMPLETE FILES of all 40 volumes of *Ed Screen* are now available on microfilm for purchase from University Microfilms, Inc., 313 N. First St., Ann Arbor, Michigan. The publishers have also made a complete file available to the DAVI Archives as a gift.

• • •

Maine's first closed circuit television program went on the air in October from the College of Education building at the University of Maine. Operated in cooperation with the Orono public schools, the program will also provide observation of classroom teaching for a team teaching project.

• • •

Robert M. Isenberg has been appointed director of the Rural Education Service Division, NEA. He succeeds Howard A. Dawson after nine years as his assistant director. Mr. Dawson, who retired August 1, had served as director since the Division was created in 1936.

• • •

Cecil Wilkinson's work in educational television and AV at Scarsborough, Ontario, was the topic of an article in *Canadian Industrial Photography* for April 1961. The article reports that Mr. Wilkinson and staff were shooting their first color movie, *Vital Decision*. The film is designed to help beginning high school students choose the right courses.

DAVI Booster Identified

Rosario S. Tan of Manila reveals that DAVI's "unknown" benefactor cited by Florence Fan in the April issue of AVI is the audiovisual center for the Manila public schools. To date, the center has forwarded some 20 DAVI memberships to a local subscription agency. Writes Mr. Tan: "We are encouraging membership in DAVI among public schools and teachers in order to help fill the need for up-to-date information about the audiovisual field, of which there is a dearth here in the Philippines."

The Center also lends out films, filmstrips, and other materials. It organizes seminars and workshops, offers consultant services, and engages in production and research.

Watch That Back Cover

Will anyone who finds the label obscuring any part of the advertiser's message on the back cover, please tear off the cover and mail it to Jack Faber, advertising manager. (AVI will send you a new issue for your files with back cover intact.)

Charlie
the Destroyer

DON'T GET UPSET!

He can't hurt them, because you get better protection against corrosion when you specify LEVOLOR. LEVOLOR head channel and bottom rail are coated first, *then formed*. It means that the protective paint is inside as well as outside.

Information that insures the best installation possible is a service all LEVOLOR representatives will give you. They will submit a prospectus covering every detail of your Venetian Blind installation—help with the specifications and make a final inspection *after* the blinds are installed. It is a service that guarantees good specifications and good Venetian Blinds.

LEVOLOR (TRADE MARK OF LEVOLOR LORENTZEN) VENETIAN BLINDS

AUDIO-VISUAL **CONVENTIONAL** **SKYLIGHT**

Levolor Lorentzen, Inc., 720 Monroe St., Hoboken, N. J.

ARE YOU WORKING MORE NOW AND ENJOYING IT LESS?

Editorial / *Anna L. Hyer*

FROM MY UNEASY CHAIR in the national office I see and hear rumblings that would lead me to believe that many audiovisualists are "working more now and enjoying it less." But occasionally I hear or see contrasting evidence. For example, I recently received a letter from a member which ended with this question: "Is it possible that we are working ourselves out of jobs?" Not long ago a well-trained building coordinator in a large high school told me that upon his resignation his job was to be turned over to a part-time untrained teacher. And in a large school system an AV coordinator of long standing was shifted to another slot and the administration of the department assigned to a librarian with no prior experience in the AV area.

Why should these opposing circumstances exist? A part of the answer obivously lies in the faulty image of instructional media—their role and importance—held by many administrators and other educators. Those lukewarm about the non-print media and those under certain kinds of administrative pressures are willing to settle for AV services that "do less."

Another factor is that we are in a transition period in which two forces are trying to counterbalance each other. We cannot yet free ourselves of enough tasks to allow sufficient time for the new ones facing us. Many of us are trying to carry the role of the AV director of the 1950's as well as of the 1960's. There are conditions, however, that will tend to alleviate our present load.

When instructional media are given adequate attention in the pre-service education of teachers, supervisors, and librarians, then less time will be required for inservice activities. More teachers will locate, select, and prepare their own instructional materials if the facilties are at hand and more time is given for lesson planning. With proper training, supervisors and teachers will skillfully integrate a variety of teaching materials into the curriculum. Librarians will, to the extent that their time permits, aid in cataloging, storing, and circulating audiovisual materials.

There are other developments that will save time. In some schools administrative and "housekeeping" tasks are being automated or semi-automated. More instructional systems are being planned and executed at centers remote from the local school system.

Obviously, however, the millennium has not yet arrived. At the present time, each new instructional material or media is added to the 40 or so types of materials already available to the teacher. As with the curriculum, the tendency is to add but seldom to subtract. Eventually we must ask ourselves: "Are all these devices necessary? Do some overlap the usefulness of others without adding major unique features? Which are basic? Which combine the unique features of two or more others?"

Perhaps some honest answers will reduce the spread of our tasks.

Our transition period is a troublesome one in other respects. We are faced with clarifying for ourselves and for others our unique contribution to the educational process in an age when educators are struggling with television, programed instruction, the "Trump" school, and team teaching. If we are not clear ourselves, we cannot prescribe the inservice and pre-service needs of our personnel. If we cannot clarify our role to school administrators we cannot expect to retain our supervisory positions and the financial support for non-book instructional materials.

To those of us who are "working more now and enjoying it less," I can only suggest that we switch to heeding some of the advice we give so freely to others. We might start by critically analyzing our role, our materials, our procedures, to see how much dead wood we can find.

Naturally we would be willing to prune this out, displaying the flexibility and forward look we recommend for other educators. Or would we?

The new North Park Elementary School, Roy, Utah, selected by A.A.S.A. for its exhibit of outstanding school designs.

"This motion-picture projector operates more than 400 hours a year... and takes it"

Says Mr. John Larsen, Director of Audio-Visual Education and Television for the Weber County, Utah, School System, shown here with Principal Wheatley J. Taylor and Instructor Don Clarke.

"Our new 500-pupil school has an extensive audio-visual program—and our single Kodak Pageant Sound Projector is moved from classroom to classroom around the court, to bring motion pictures to our students.

"As a result, our Pageant Projector is busy three to four hours a day, three to four days a week during school hours. It even works after school, since we frequently lend it to civic groups.

"Evidently this projector was built to work hard, because we've had no problems with it. It's also one machine our teachers feel they can operate easily."

If you're responsible for an audio-visual program, don't you want a projector which can take hard treatment by inexperienced operators? A projector which they can operate without embarrassment? The Kodak Pageant 16mm Sound Projector was built to answer such problems. It shows a brilliant picture even in hard-to-darken rooms, and its sound system is suited either to small room or auditorium presentation.

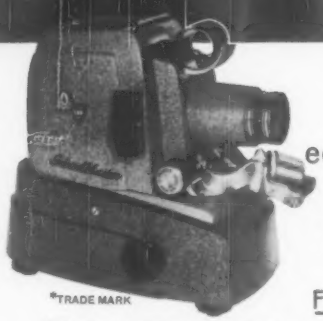
Call your Kodak audio-visual dealer for a demonstration arranged at your convenience. Or write for Bulletin V3-65. No obligation, of course.

Kodak Pageant Projector 〉 **EASTMAN KODAK COMPANY,** Dept. 8-V, Rochester 4, N. Y.

Frame shown is from a set of six filmstrips, "Phonics—A Key to Better Reading" by Society For Visual Education*, Inc.

How to focus on phonics ...yet make learning a TREAT!

PHONICS can be a boring struggle for students and teacher alike. To dispel this drudgery, a teacher combines today's compelling filmstrips with class participation. After introducing a filmstrip to her reading group, she permits the children to individually review the strip for the class. Each pupil takes pride in being part of the project—finds learning phonics can be fun—and develops presence and confidence by speaking in front of the class.—Just one example of how filmstrips or slides, plus a measure of creativity, can make dull subjects vivid, living and interesting. For a wealth of helpful information send for the 48-page Graflex Audio-visual Digest, containing leading AV articles from the past three years. 25¢ per copy. Free to AV directors.



*TRADE MARK

for versatility, economy, convenience choose

SCHOOL MASTER*

...the FOUR-IN-ONE Projector

■ **It's a Filmstrip Projector.** Simplified threading, framing. Precise advance without backlash. Operates from right or left. Twin aperture plates hold film at correct optical angle. Exclusive accessory rewind take-up automatically rewinds filmstrip into storage can. ■ **It's a 2 x 2 Slide Projector.** Low-cost accessory slide changer attaches in seconds, without tools. No need to remove changer while filmstrip is projected—or to remove filmstrip gate while projecting slides. Accessory magazine slide changer shows slides in sequence—without handling. ■ **It's a Microscope Slide Projector.** Accessory "Micro-Beam" unit attaches without tools. Projects standard dry-mount lab slides in crisp detail up to 300X magnification. Greater illumination than conventional microprojectors. No need to darken room completely. Check-stop aperture disc permits concentration on specific sections of specimen. ■ **It's a Tachistoscope.** Accessory "Speed-I-O-Scope" attaches without tools. Permits flash exposure of various visual stimuli. Accurate control of exposure duration, intensity and duration of stimulus. Ideal for memory training, improving reading speed, arithmetic, language, etc.

GRAFLEX

A SUBSIDIARY OF GENERAL PRECISION EQUIPMENT CORPORATION

School Masters, available in 500 and 750 watt manual or remote control models. For additional information, see your Graflex AV Dealer. Or, write Dept. AV-111, Graflex, Inc., Rochester 3, N.Y. In Canada: Graflex of Canada Limited, 47 Simcoe Street, Toronto 1, Ontario.